

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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[PRICE 6D.

TO ENGINEERS, PLANT-DEALERS, AND OTHERS—

Limehouse, Middlesex.—Messrs. RAMSEY will SELL, BY PUBLIC AUCTION, on Wednesday, the 10th of May, at Twelve o'clock, on the premises, near the Limehouse cut-bridge, Bow common, Middlesex (under an execution for rent), an 8-horse HIGH-PRESSURE STEAM-ENGINE, complete, air and force-pump, gas receiver, large iron pans, iron pipes, crucible, iron digester, and various other effects.—May be viewed two days prior to sale; catalogues to be had on the premises, and at the auctioneers' offices, 61, Poplar, Middlesex.

VALUABLE MINE SHARES, in Flintshire.—TO BE SOLD,

BY AUCTION, by Mr. JAMES WILLIAMS, at the White Horse Hotel, in the town of Holywell, in the county of Flint, on Wednesday, the 10th of May, at Two o'clock in the afternoon, subject to such conditions as shall then be produced, and in the following lots—

LOT I.

THREE SIXTEENTH SHARES OF THE TERFYNN LEVEL LEAD MINE, situated at the east end of, and adjoining, the celebrated Tal-y-goch Mine, in the county of Flint. A strong vein of ore has already been discovered, by means of a level, but that not being deep enough to unwater the mine effectively, a second, and deeper, level is now driving. This mine is in one of the best mineral districts, and is esteemed a most promising adventure. The ground leased to the company comprises upwards of 600 acres.

LOT II.

FIVE TWENTY-NINTH SHARES OF THE TALACRE LEAD MINE, which is a continuation of the above, and is worked by means of an old level, which has been recently opened to one of the veins producing ore. Another level is now in progress, and has already been driven upwards of 600 yards, with every prospect of cutting another vein in a short time. This mine is considered a very valuable one, and there is every reason to believe it will very soon be in profitable operation. The ground leased to this company comprises upwards of 800 acres.

LOT III.

FOUR SIXTEENTHS OF THE BRYNFORD-HALL LEAD MINE, on the west end of, and adjoining, the well-known Milwyr Mine, near Holywell.

LOT IV.

FIFTY-EIGHT FIVE-TWELFTHS OF 42 SHARES OF THE HOLYWELL LEVEL MINE—near Holywell, aforesaid.

Further particulars may be obtained on application to Thomas Harrison, Esq., Stasbury, near Holywell, or Messrs. Roberts and Son, solicitors, in Mold.

ELIGIBLE INVESTMENT IN FLINTSHIRE.—SHORTLY

WILL BE OFFERED FOR SALE, BY PUBLIC AUCTION, unless in the meantime disposed of by private treaty, of which due notice will be given, all that ONE UNDIVIDED THIRD PART, or SHARE, of and in all those valuable, productive, and well-known COLLIERIES, called the EWLOE HALL, MAKE HAY, LODGE CROFT, and NORTHPORCH HALL COLLIERIES, in the parishes of Hawarden and Northop, in the county of Flint, and also of and in all the powerful ENGINES and MACHINERY, RAILWAYS, VESSELS, OVERFAIR ROYALTIES, COALS PURCHASED, but yet unworked, BOOK DEBTS, and other STOCK and MATERIALS thereto belonging. These collieries, which are in full and profitable operation, are held, subject to easy royalties, under different leases, for various long terms, from Sir R. B. Glynn, Bart., Admiral Dundas, and others, in all of which many years are yet to come and unexpired, and the lands comprised in them embrace a very large extent of country.

The beds of coal range in thickness from twelve feet to one yard, are of excellent quality, and are almost without limit as to quantity. The recent produce has been after the rate of 20,000 tons per annum, or thereabouts, but a much larger quantity might easily be raised.

The situation of the collieries is admirable, having good turnpike roads, connecting them with the city of Chester and all the neighbouring towns in the vicinity; they also lie within an easy distance of the River Dee, and, by means of recently made and well-appointed railways, are connected with excellent shipping wharfs at Connah's Quay and the Queen's Ferry, on the banks of that river, whence coals are shipped to Chester, Ireland, the Isle of Man, and along the English and Welsh coasts. At Connah's Quay Wharf vessels drawing thirteen feet of water can take in their cargoes at any state of the tide.

By a recent survey and valuation of the machinery, stock, &c., the capital alone employed in these great works amount, exclusive of the beneficial interest in the many valuable leases under which the same are carried on, to nearly £500,000. Owing to their magnitude and extent, as well as to afford better opportunities for investment in these productive and rapidly improving undertakings, it is intended to divide the said share into four equal parts, or shares, of one-twelfth each, and so to offer the same in four different lots.

The present sale is ordered by the trustees of the late William Rigby, Esq., to enable them to fulfil certain trusts which now devolve upon them. The only other proprietors with the said trustees are John Rigby, Esq., of Sandon-Terrace, Liverpool, and the representatives of the late William Hancock, Esq., of Hawarden, by whom the works are now carried on, under the well-known firm of Rigbys and Hancock.

Every other information relative to the collieries may be had on application to Mr. Staley, surveyor and manager, at the Kynance Office, Hawarden, Flintshire; and for any other particulars, apply to Mr. William Williamson, jun., solicitor, Holywell, Flintshire.

RAVENSBOURNE-WOOD MILLS, Deptford-creek.—

Messrs. ELLIS and SON beg respectfully to announce, that they have been favoured with instructions, in consequence of a dissolution in partnership, to SELL, OR LET, the above valuable and important FREEHOLD ESTABLISHMENT, which, from its character, extent, and commanding situation, must hold the first rank among manufacturing premises in the neighbourhood of the metropolis. The buildings have recently been constructed upon the most approved principles, at an estimated expense, and offer to an engineer, manufacturer, builder, &c., an opportunity of acquiring premises that can but rarely occur. Their extensive arrangements comprise a lofty planing-room, 27 feet by 27 feet; a noble sawing-room, 100 feet by 45 feet, smithy adjoining, carpenters' shop, 27 feet by 22 feet; engine-room, boiler-house, experiment room, drawing office, clerks' office, private office, reception room, strong room, extensive stabling, stable, &c.; capital wharf and spacious yard. The whole of the costly, new, and improved sawing machinery, by G. Topham; two beautiful steam-engines, of 20-horse power each, by Newcomen, all in capital working order, may be taken at a valuation, or, if required, to be removed; but it is presumed that, under competent management, a large and lucrative trade may be carried on. Immediately adjoining the premises is an apparatus for drying timber, with sheds, yard, &c. The situation is admirably adapted to any extensive mercantile or manufacturing business, being in a commercial and populous neighbourhood, having excellent water margins, and easy and rapid communication with London by railway, while the recent removal of ship building at her Majesty's dockyard, with the occupation of other premises in the neighbourhood by important firms, must tend much to the prosperity and improvement of property generally at Deptford.

To be viewed with tickets (without which no one will be admitted), which may be had of Messrs. Burgeson, Thrap, and Clarke, solicitors, 14, Oxford street, and of Messrs. Ellis and Son, auctioneers and estate agents, 26, Fenchurch-street, by whom all necessary regulations for the premises are to be conducted.

CARSON'S ORIGINAL ANTI-CORROSION PAINT—

especially patronised by the British and other Governments, the Hon. East India Company, the New River Company, the principal dock companies, and other public bodies.—The ANTI-CORROSION PAINT has been used by the Hon. Board of Ordnance for upwards of half a century, who have proved it to prevent rust or corrosion on iron, longer and better than the very best white lead, or any other description of paint; and, in consequence of its possessing this remarkable quality, all the iron guns and gun carriages, both for land and sea service, have been painted with it for the above period. It, therefore, will be found a very superior PAINT-PAVATIVE OF IRON-BOATS, IRON-BRIDGES, PIERs, or any other extensive IRON-WORK. It has also been used in great quantities by other public bodies, and by numbers of gentlemen of the first distinction, to preserve wooden houses, farm and other outbuildings, conservatories, park palings, gates, from rusting, iron bridges, copper, zinc, lead, oil copper, &c., boats, and trees to prevent scaling. This paint is admirably adapted for preventing the decay of old stone or brick structures, churches, or other public offices requiring an efficient defence against the elements, as it will become harder than stone in a few months after it is laid on. It is particularly recommended to West India proprietors, emigrants, and others connected with the colonies, who will find it to stand all climates better than any other paint hitherto invented. The superiority of our Anti-Corrosion to any other paint may be easily inferred from the simple fact, that its use has always been most successfully adopted by colour manufacturers, painters, &c., and engineers, and all others interested in the use of common paints.—Manufacturers, junctions, &c., properly prepared, will effect a very considerable saving by deriving their materials to order the Anti-Corrosion Paint, as any labourer can lay it on, thereby avoiding the excessive charge generally made by painters.—The Ward-Lane Express, in alluding to this paint, says—“which, from its intrinsic durability and elasticity, has been patronised by the Hon. Board of Ordnance for upwards of half a century, and is held in the highest estimation by persons of the most discriminating taste.”

An eminent writer (Mr. London) speaks of this paint in the following terms—“It lasts on iron, when applied to iron, or well-seasoned timber, or masonry, &c., without requiring a renewal during a man's life-time.”

The Anti-Corrosion is a powder, and it will keep any length of time. Colours—light green, dark green, yellow-green, dark blue, light blue, light and dark charcoal, dark red, bright red, &c., 10s. per cwt. in boxes of 20 lb. and 10 lb. each.—Large boxes, 10s. 6d.; small boxes, 10s. 4d.—Small bottles, 10s. each.—Gilt price—10s. 6d.—Large barrels will be sent free by post.

The Original Anti-Corrosion Paint is only to be obtained of WALTER CARSON, Merchant to the Government, manufacturer to the Royal Public Works, 12, Victoria-road, back of the Bank of England, London, where the most numerous testimonials may be seen from the military, gentry, and clergy, who have used the Anti-Corrosion for many years.

MINING IN CARGAL MANOR.—PARTIES desirous of OBTAINING SETTS in the ABOVE MANOR, may apply to Capt. Puckey, the lord's agent, Fowey Consols Mine, Lostwithiel, Cornwall.

MR. JOHN KYMER'S PATENT FURNACE, whereby an ECONOMICAL APPLICATION of FUEL is EFFECTED, with RAPID EVAPORATION, and WITHOUT SMOKE.—A furnace, on this construction, is erected, and at work, at Messrs. Todd and Co.'s, ab. Minster, where it may be seen, by card, to be had on application to Mr. J. M. Sunley, 71, Cornhill, or Mr. H. English, Mining Journal Office, 26, Fleet-street.

MINERALS, SHELLS, FOSSILS, &c.—FOR SALE, a very EXTENSIVE, CHOICE, and HIGHLY INTERESTING COLLECTION, in two cabinets, of fifty-three drawers; comprising many exceedingly curious relics in fossil woods, shells, &c., besides an infinity of minerals.—For cards to view, and to treat for the purchase, apply personally at 24, Cotton-street, Poplar, near Blackwall; or, by letter, to Mr. J. T. Cooey (late with Mr. George Robins), London.

THE IRON TRADE—TO CAPITALISTS.—A GENTLEMAN having a VALUABLE PATENT TO TAKE OUT, where a great quantity of iron (manufactured) will be consumed, will be READY TO TREAT with any PARTY who has influence and capital at command.—Parties addressing to “H. B.” (post paid), Mining Journal, will be duly answered.

None but principals will be treated with.

COLD-BLAST ANTHRACITE PIG-IRON.—Mr. D. MUSHET,

the author of the celebrated Treatise on the “Manufacture of Iron and Steel,” who has made a series of most elaborate experiments on this extraordinary iron, in concluding, remarks:—“From these, and the former comparative experiments, it is abundantly evident, that the pig iron from making, with cold-blast and anthracite, at the Yatalyner Iron-Works greatly exceeds in strength, in defective powers, and capacity to resist impact, any iron at this time manufactured in the United Kingdom.”

Yatalyner Iron-Works, Swansea.

RUSSIAN STEEL IRON—“OLD SABLE”—C C N D.—

The UNDESIGNED being the SOLE AGENTS of the Messrs. DE DEMOUFF in England, the above MARK OF IRON can only be OBTAINED through CHARLES GRAHAM & CO., 26, King's Arms-yard, London.

GRAHAM BROTHERS, 18, High-street, Hull.

CORNWALL.—A MOST VALUABLE INVESTMENT.—

TO BE SOLD, or LET, for a term of twenty-one years, the RIGHT to ONE UNDIVIDED MOIETY of all the TIN and TIN WORKS in and throughout the estate of TRETOIL, in the parish of Lanivet. This highly productive and lucrative tin mine is too well known and appreciated to need any lengthy comment.—For treating for the above, application may be made to Mrs. Headrow, 8, Rosemary-row, Truro, or to Messrs. Paynter and Whatford, solicitors, St. Columba.

INVESTMENT.—Mr. ENGLISH is authorised to negotiate

for the INTEREST of ONE-THIRD in a PROPERTY, which not only pays full 10 per cent., on the capital employed at the present moment, but holds out advantages to the extent of treble its present returns. The sum of £1000 will be required, merely for floating capital, with the view of extending the business, on the advance of which interest, to the extent of one-third, will be at once secured in the property, on which nearly £10,000 has been already expended.—For particulars apply personally to Mr. English, 24, Fleet-street, London.

SALE OF FREEHOLD PROPERTY.—TO BE SOLD, a FREEHOLD PROPERTY, in a desirable locality, with rental of £100 per annum, secured by lease, on which a large sum has been expended in the erection of extensive buildings, used for Foundry and engineering purposes.—Address to “W. C.,” care of Mr. H. English, 24, Fleet-street.

WANTED, A PARTNER, with a small capital, in an ENGINEERING ESTABLISHMENT, in the centre of a coal-field, and within a short distance of a shipping port. One who could render assistance in the management would be preferred.—Apply to Mr. English, office of the Mining Journal, 26, Fleet-street, London, of whom every particular may be obtained, and reference given to the principal.

TO BE SOLD, BY PRIVATE BARGAIN (to close an account), the GETRUY SLATE QUARRY, Merthyr Tydfil, situated about eight miles from Port Madoc, which is the shipping port. This quarry is held under lease, of which twenty years are unexpired, at a rental of one-ninth for slate made at the quarry. Very little expense is necessary to complete the clearings required to carry on an extensive work, which can be done more cheaply than in any neighbouring quarry.—For further particulars, and for terms, apply to Mr. Charles Bunt, auctioneer and general agent, Port Madoc, Carnarvonshire.

FOR SALE, by PRIVATE CONTRACT, on the ROSEWALL HILL MINE, one and a half mile from St. Ives, in Cornwall, THREE STEAM-ENGINES, all now only three years ago, No. 1, a 20-inch cylinder PUMPING-ENGINE, with stroke 10 feet in the cylinder, and 7 feet in the pump, with all wood work complete, including doors and windows and first piece of connection rod, No. 2, a STAMPING-ENGINE, in Missis' completed cylinder principle, 4-horse power. The consumption of coal with this engine never exceeded 2½ lbs. per horse power per hour. No. 3, a WINDING-ENGINE, 20-inch, double power, Boulton and Watt engines, 6 feet stroke, with winding apparatus from complete. The whole of these engines are on the most modern construction, made of the best material and workmanship; are only one and a half miles from a good shipping port, and may be had very cheap.—Application to be made to Mr. Nicholas Franks, of Caerphilly, or to Mr. James Ross, engineer, at Bedruth; or to Mr. English, 24, Fleet-street, London.

TWENTY-HORSE POWER CONDENSING STEAM-ENGINE.—TO BE SOLD, a bargain, a SECOND-HAND CONDENSING STEAM-ENGINE, by eminent makers, with boiler, &c., complete, as found. The whole is in excellent condition, and has been erected regardless of expense. May be seen at work, if required.—Apply to Mr. Medwin, engineer, factory, Brougham road.

TO ENGINEERS, MILLWRIGHTS, AND MACHINE DRAUGHTSMEN.—WANTED, in an Iron Foundry and Engine Shop, in the country, where about seventy hands are employed, a YOUNG MAN TO ASSIST IN THE MANAGEMENT.—He must possess a knowledge of common mechanical practice in the engineering and millwright departments; he must be a good draughtsman, and steady to his tools, and a member of the Established Church.—Any application marked “T. B.”—under cover to the Editor of the Mining Journal, 26, Fleet-street, London—slating age, salary, course of education, &c., will be attended to.

TO ENGINE-BUILDERS AND PUMP-MAKERS.—

PALMER and PERKINS' PATENT PISTON, fitted in a 10-inch pump, may be SEEN any day at SCOTT'S WHARF, SOUTHWAKE BRIDGE, Brixton.—In this application of it, there is no doubt, an ordinary amount of friction—represented by 20%—is reduced to 10%. If these piston were fitted to the six pairs of main and other condensing engines, the efficient power, or economy of fuel, would be materially increased; the larger the engines the more material would be the benefit.

TO RAILWAY COMPANIES and CONTRACTORS, COAL-GROWERS and IRONMASTERs, &c.—BRYANT, JAMES, and MAY, beg to announce that they have now, and are continually increasing, a large stock of OILS, GREASES, &c., of various qualities, prepared for every description of work, from the easiest passenger carriage to the heaviest waggon. The highest qualities can be given of quality; prices very moderate.—Orders may be addressed, and samples and particulars obtained, of 16, Philpot lane, London.

TO MINING ADVENTURES AND OTHERS.—Important

RATING OF FIFTY PER CENT. in the article of GREASE—SOPHIE PERCEVAL, of Green street, Wellington street, Blackfriars road, London, begs respectfully to inform the BUSINESS INTEREST that she MANUFACTURES an IMPROVED PATENT ANTI-FRICTION GREASE, for wheels, tram-wagons, carriages, and all purposes for which oil and grease are now used.—A sample will be forwarded free, on application as above.

WHITWORTH'S PATENT PLANING MACHINE, with

soft-Wood wheel, screw motion, and reversing tool, to plane in both directions.—SELF-ACTING SLIDE AND SCREWING LATHE, DRILLING MACHINE, GUIDE SCREW-STICKS, MORTISING HAMMERS, &c.—Great sizes of the

above.

J. HULLER, Agent.

IMPORTANT PATENT IMPROVEMENT IN CHROMIUM-PLATES and WATCHES.—H. J. DODD, of STRAND, who obtained the high distinction of receiving the Government Reward for the compensated production of the best chromate ever submitted to twelve months' public trial, begs to inform the public that the MANUFACTURE of the WATCHES, CHRONOMETERS, and CLOCKS, is SECURED to him by THREE SEPARATE PATENTS, respectively granted in 1840, 1841, and 1842.—BRIGHT LONDON WATCHES, provided to three forms, in great sizes from 40 to 60 mm. of width.—GOLD CHRONOMETERS, with gold cases, three of 40, 45, and 50 mm. diameter.—GOLD CLOCKS, “Dodd's” Appendix to his Patent Work on “Clocks,” is now ready for examination.

SHEFFIELD, ASHTON-UNDER-LYNE, & MANCHESTER RAILWAY.—TENDERS FOR LOANS.—

The directors are prepared to GRANT MORTGAGES, under the powers of their Act of Parliament, FOR LOANS OF MONEY, in sums of not less than £1000 each, and for periods of three, five, or seven years, of the option of the lender.—Interest, at the rate of 5 per cent. per annum, will be paid half yearly, for which interest, warrants will be given for the payment, payable at the company's bankers in London, Manchester, or Sheffield.

Further information may be obtained at the company's offices in Manchester or Sheffield, at the office of Messrs. Parker and Smith, solicitors, Sheffield; Messrs. Bagshaw and Stevenson, Manchester; or Messrs. Johnson, Son, and Waterfall, Taylor, London.

Manchester, Feb. 15.

J. PLATFORD, Secretary.

SHEFFIELD, ASHTON-UNDER-LYNE, & MANCHESTER RAILWAY—EXTENSION OF TIME.—CONTRACT FOR SUMMIT TUNNEL WORKS.—

The directors of this company are prepared to RECEIVE TENDERS for the COMPLETION of the western portion of the SUMMIT TUNNEL, near Woodhead, on the above line of railway.—Plans, sections, specifications, and draft forms of contract, may be seen at the Railway Office, 16, Piccadilly, Manchester, and after Monday, the 10th inst. Every facility will be given to parties wishing to inspect the shafts and driftways previous to tendering, and Mr. Purdon, the assistant-engineer of the company, will be in attendance on the works, to accompany contractors and others, and will give all the necessary information respecting sites through which the driftways have been formed.

Sealed tenders, addressed to the secretary, to be sent to the Office, 16, Piccadilly, Manchester, on or before the 1st of May, or at the Norfolk Arms, Glossop, before One o'clock in the afternoon of Wednesday, the 17th May, after which time no tender will be received.—Printed forms of tender may be obtained on application to the secretary, and no others will be accepted.

Parties tendering, or some other person duly authorised by them, will be required to be in attendance at the Norfolk Arms on the above day and time of letting.

By order,

J. PLATFORD, Secretary.

TO CONTRACTORS FOR PUBLIC WORKS.—CALEDONIAN CANAL.—

The commissioners for the CALCEDONIAN CANAL will RECEIVE TENDERS for the FORMATION of certain NEW, and the REPAIRING of the present WORKS, on the line of the canal.

The principal works consist of a NEW LOCK (170 feet long in the chamber, and 40 feet wide), with lock gates, at Gaithersby; two pair of new lock gates for Fort Augustus locks; the renewal and repair, to a considerable extent, of the masonry, and other portions of the present locks; a considerable quantity of dredging excavation and dredging; the formation of weirs, and other similar works.

LAW INTELLIGENCE.

PATENT IRON ROLLING AND COMPRESSING COMPANY.

COURT OF COMMON PLEAS—MAY 5.

BRADLEY v. FAYER AND OTHERS.—Several cases appeared in the special paper, in which the plaintiff was identified, and the defendants, though different persons, were all members of a certain company, called the Patent Iron Rolling and Compressing Company.—It appeared that the plaintiff had brought his action, and obtained judgment, against the secretary of the company, as a nominal defendant, and afterwards, in order to obtain the fruits of his judgment, issued a *scire facias* against certain of the members, in their individual capacity. Many of the defendants pleaded respectively to the *scire facias*, negativing various defences, founded on the irregularity of the proceedings anterior to the issue of the writ of *scire facias*. In these pleads there were, in several cases, demurrers.—The Court, after hearing counsel in support of the several pleas, determined that the defences suggested could not be maintained; and that, if any irregularity could be shown to have taken place before the *scire facias* issued, the proper course to pursue was to apply to the Court by motion, instead of pleading. The Court, upon these considerations, gave effect to the demurrers, and pronounced its judgment for the plaintiff.

BRIGHTON RAILWAY—CUNDY'S PROJECTED LINE.

COURT OF COMMON PLEAS—MAY 5.

ROGER v. KNAPP.—The action was brought to recover contributions from the defendant, to the amount of £400, being one-fourth part of certain bills of costs, incurred on the joint retainer of the plaintiff and the defendant, and two other persons named Robert and Clarendon.—At the trial before Lord Chief Justice Thindal, at the Guildhall sessions after Lord Macclesfield's term, it appeared, from the statement of the plaintiff's counsel, that in 1807 the above-named gentlemen, with others, endeavoured to obtain a line of railway from London to Brighton, under the name of "Candy's Line," which was to be without a tunnel. Every effort was made to command the bill which the parties engaged in the undertaking intended, if possible, to obtain from Parliament, and the usual notices were given; but it was discovered by the promoters of the bill that they could not get over the standing orders, and upon that ground the bill was dropped. Afterwards, various arrangements were entered into between the parties to the competing lines, and Candy's Line became merged in the other line, and the company was dissolved. The secretary was dismissed, and the offices were given up; and about that time actions were brought against Mr. Roger, the present plaintiff; Mr. Knapp, the present defendant; Mr. Robert, and Mr. John Clarendon.—The learned Chief Justice intimated a strong opinion that the actions could not be supported, and that the plaintiff's only remedy lay in a court of equity. A nonsuit was therefore entered, and a rule was obtained to set that cause aside, and for a new trial, in the beginning of last term.

Mr. Bergwood Sturges showed cause against the rule, and cited various authorities to shew that the plaintiff, being a partner with the defendant, could not recover in an action for contribution, but must resort to a court of equity. He argued, also, that the affidavit of Mr. Pearson, which stated the evidence that he was prepared to give at the trial, if the cause had not been discontinued, was not admissible, as it was a general rule that the affidavit of a person examined at the trial could not be used; and that had been gross negligence in not proving by applying to Mr. Pearson, to know what evidence he could furnish.—Mr. Bergwood Sturges (with whom was Mr. White) contended, in support of the rule, that no partnership at all had been formed, and that the arrangements were mere contracts, and signified an agreement was entered into between the four parties that they alone should be responsible to Mr. Pearson, as for most satisfactorily have shown from Mr. Pearson's testimony, if he had been permitted to go on with it.—The Court, after some deliberation, thought that, under the circumstances, the rule ought to be made absolute for a new trial, upon payment of costs by the plaintiff.

A MANAGING DIRECTOR IN TROUBLE.—We are not aware that very great interest is attached to the progress of the Westminster Improvement Company by our readers, or, indeed, by the public generally—though it will be recollect that it was ushered into the world under the highest patronage and brightest prospects—but the mishaps of its projector may enlighten the world to the melancholy fact, that many speculating gentlemen, who imagine themselves capable of making every one's fortune, are not always certain of securing their own. In the Insolvent Debtor's Court, one day this week, Winchcombe Henry Bayly Hartley, Esq., made his appearance to account for his inability to meet certain vexatious demands, when he acknowledged his greatest disappointment to arise from the promises of family patronage not being duly met, and also from "great expectations of profit from a company he had projected, called the Westminster Improvement Company, of which he was the managing director." In the course of an examination, it was elicited that the gentleman's debts amounted to £33,000. 17s. 6d., and credits to the amount sum of £10,000, and among the tradesmen he had "patronised," it appeared there were ten chemists, twenty-two hotel and tavern keepers, nine tailors, six wine merchants, five milliners, thirteen boot and shoemakers, seven habellers, five clogmakers, eight coal-merchants, four liverymen, four lodging-houseskeepers, eight butchers, thirteen grocers, three pianoforte makers, eight bakers, five grocers, &c., &c., &c.—After some discussion, the court ordered the insolvent to file the papers in his possession relating to the Westminster Improvement Company, and adjourned the case for him to re-advise as "managing director" of that concern. Is it not somewhat strange, that a gentleman with such a commanding name, and with the influence he must have had, to be successful in engaging such an array of supporters as are here exhibited, could not effect the establishment of a mere company, and on which he considered all his hopes rested?

STEAM ENGINE NECESSITY.—At the monthly meeting of the Birmingham commissioners, on the minute in reference to this subject being read, Mr. Turner begged to know from Mr. Jones whether he had ascertained the saving of fuel effected by the application of the smoke conserving apparatus in his furnace?—Mr. Jones was unable to give any precise information upon the subject; but he could assure Mr. Turner that the operation of the apparatus had been most satisfactory to himself.—At a subsequent stage of the proceedings, Mr. J. Cadbury said that he had had many applications on the subject of the simple and inexpensive apparatus for conserving smoke, in which he had adverted at the last meeting; and he had the pleasure of stating that the trials made had been very satisfactory, the results clearly substantiating one important fact—namely, the capability of conserving the smoke of steam furnaces. From the calculations which had been made, the consumption of coal by the plan referred to had been ascertained to be no third less than under ordinary circumstances, and the apparatus was erected at a very trifling expense. The invention was given to the public by friends of his in Lancashire, by whom it had been discovered, who had found it to answer every purpose sought to be accomplished by the numerous inventions of the kind which had been recently patented; and he strongly recommended parties who had steam engines at work to give the apparatus a trial, or at least to inspect the plan, before they adopted any other method. So simple was the invention, and so readily might it be applied, that he had only regretted an obstruction respecting it at this meeting, and at first in the afternoon of the same day it was in full operation in his own steam furnace.—At the same meeting, a memorial was read from a number of rate payers, in Lower Broad-street and Broad-street, complaining of the nuisance arising from several steam-works in that neighbourhood, which it was stated were not carried higher than the ordinary buildings.—Mr. H. Hobley also presented a memorial from fourteen landlords, the proprietors of 183 houses in the same neighbourhood, complaining of the smoke arising from the steam engine of the New Union Mill, by which their property was greatly depreciated.—Mr. M. Banks said it was the intention of the New Union Mill Company to adopt measures, if possible, for conserving the smoke of their steam furnace.—Mr. J. Cadbury hoped they would try the plan he had spoken of, and which had been found to answer most satisfactorily in many cases in which it had been applied.—The memorials were referred to the steam-engine committee, to whom Mr. Cadbury's name was added.

FARST BREKETON FOR AN EARTHQUAKE.—An awful accident, attended with loss of life, took place on Saturday, the 10th ult., at Blackwood, a few miles from Newport, in Monmouthshire. The Tredgar iron Company have a branch railway from their works to Newport, about twenty-five miles in length, and which passes through the above village. On the day mentioned, the flying engine was stopped at Blackwood, and the engine-driver had struck a man from the engine-pipe near the refreshment, where they had just been made when a terrible explosion took place, which shone the whole village, burnt out all the windows, shamed the public-house, and, we are sorry to add, that Mr. Davis, of Shire Hall, Farmer, and Mr. F. Williams, a tradesman, of Blackwood, who were passing the place at the time, were killed on the spot; and two other persons were afterwards discovered in a field, as evidently injured by pieces of the boiler (one of which was found half-pierced from the mouth), that it is thought they cannot recover. The damage done is estimated at £1000, and the explosion is said to have been caused by the driver neglecting to open the valve on shutting off the steam.

FAVORABLE PROSPECTS OF THE NEW BRIDGE.—A striking accident happened at this engineer's works, over Wadsworth Bridge, to one of the bars suspended in attempting to lift the rollers used for working up the materials, when he got to within 10 ft. of the bridge pier, when the rollers fell to land and one drove in between the rollers, a spur of iron cut both and a garter, and, but for the engine being immediately thrown off, we never have been able to prevent it from falling into the water, as that part of the machinery had to be taken to pieces. Mr. Thompson recurred to Mr. Thomas' Bridge, when it was discovered that no bars were broken, but the dock was entirely torn off the pier.

NEWTON PROSPECTS OF LOSS FOR MANUFACTURERS.—It is said that Mr. Shattock and Charles Williams are about to proceed to Spain in a few weeks, for the purpose of recovering the various remittances of cheques of £1000 in Monmouthshire, with a view to ascertain whether it is worth depending on them.

NEW COMPANIES.

In noticing such new advantages as may from time to time be brought before the public, it is hardly necessary to observe, that we must not be considered in any way to affect the correctness of the information conveyed (which, unfortunately, too often requires such cautious investigation), but merely lay such particulars before our readers as we may glean from pro-ports, advertisements, &c., to call their attention to, and make them acquainted with, the subject.

THE CALLINGTON MINES COMPANY.

This company is established for taking and working the copper and lead mines situated at Redmire, near Callington, late belonging to the Redmire Consolidated Mining Company. The late company expended about £8,000 on these mines, and had raised £7,000 worth of ore; but, just as they had come to a promising copper lode, and as the capabilities of the mine were about being developed, operations were obliged to be suspended, in consequence of the shareholders refusing to pay further calls, at a time when there was reasonable ground for supposing that soon, would have brought them into profitable working. The Callington Mine Company is to consist of 1000 shares, to be regulated and conducted on the cast-book or deed system; and, at the meetings, each shareholder is to be entitled to one vote for every share he may hold. Messrs. Samuel Harpur, John Peter, and Peregrine N. Johnson, have reported on the present state of the mine, in a most favourable manner, in which they recommended some extensive workings, to explore the mine, and see the lodes at greater depths, the erection of a 50-inch cylinder engine, &c.—which expenses, extending over two years, is calculated at £10,000; and it is expected much ore will be obtained during this period, and eventually prove a profitable and lasting concern.

BRITISH HOLLANDS DISTILLERY COMPANY.

This company, or "association for the production of home Hollands, brandies, and other spirituous liquors," is about being formed, for the purpose of carrying out, to the fullest extent, some important improvements made at the distillery of Messrs. Heslop, Warner, and Co., of Liverpool, requiring more capital for their development—than a private firm can command. Great advantages are offered, by the establishment of the company, to spirit dealers, and extended benefit to the community at large. It is stated that the British Hollands is literally identical in flavour with the old and long famed Schiedam—the same oily mellowness, pleasant aroma, of great purity, and the highest legal strength; the price being 10s. per gallon, while the duty alone on the foreign is 22s. 6d. Their brands are stated to require age alone to render them equal to any Cognac ever imported, and which will be sold at 10s.—while French brandies are rarely obtained for less than 30s. The fact of the works of the company being in full operation at Liverpool, is a sufficient security to the public that the undertaking is neither visionary nor speculative. The nominal capital is proposed to be £100,000, in 20,000 shares, of £5. each—a deposit of £2. per share to be paid, and which is sufficiently expected will be sufficient to establish the company, but no further call is to be made for more than £1., at three months' notice. The management of the company is to be vested in six directors; the first number to continue in office for three years, when three retire annually, but are eligible for re-election.

COLONIAL LAND COMPANIES.—No. VII.

NEW BRUNSWICK AND NOVA SCOTIA LAND COMPANY.

In a former Number we alluded to the subject of emigration to our colonies, and gave the prospectus of another land company, and, in giving that of the above company, we would make more exact that it is the duty of the Government at once to make an effort to render the valuable tracts of land possessed by the different land companies available to our industries but unemployed countrymen, which is impeded for those companies to do so, however generous they may be; and more especially when it is considered how liberally the proprietors have been spending their money on improvements, and how patiently they have waited for a number of years without any advantage to themselves—looking to the ultimate settlement of the colony for their compensation, by which they are really conferring a great benefit on the mother country in times like the present. Whenever a public company has obtained some privileges in any of our colonies there have been economies made for the settlement of the colony, and a point dropped for any others who may have preceded them in colonization. In a few years hence these companies will, no doubt, obtain their due, and be looked upon in the proper light—namely, as the pioneers of our colonial property.

INNITION.—The New Brunswick and Nova Scotia Land Company purchased from the Crown, in 1814, a tract containing upwards of half a million of acres of the most fertile land, situated in the county of York, in New Brunswick, on which they have since expended considerable sums in making roads, clearing land, building houses, mills, bridges, &c., the whole of which tract is of easy access from the sea ports, by means of these roads, and many navigable rivers. St. John is the principal port of the province, and contains about 20,000 inhabitants, from which place settlers can proceed by steam-vessel up the river St. John to Fredericton, about ninety miles distant, and contiguous to the company's lands. Fredericton is the seat of government, and contains about 4000 inhabitants; it is pretty situated on a point of land, and, for its soft and temperate climate, is not surpassed by any part of the province. Stanley is the company's chief town and settlement, and is about twenty-five miles from Fredericton, where the commissioner resides, to dispose of lands, grant licences to cut timber, and transact the general business of the company.

The lands of the company extend about fifty miles in length, and in breadth from twenty to thirty miles, and are watered by the Miramichi, the Tan, the Nashwaak, the Tay, and other smaller rivers, the banks of which are extremely flat, and, owing to their meeting with the noble river St. John, offer great convenience for settlement. The climate of New Brunswick is remarkably healthy, and congenial to the natives of Great Britain and Ireland, and it is not of all subject to those epidemics so common to the southern and western states of America.

SOD.—The chief part of the company's tract consists of rich meadow alluvial land, and gravelly intercoursed, with a moist black vegetable mould on the surface. It is covered everywhere with fine forest trees, standing well apart, and no underwood, unless it may be a few bushes here and there close to the banks of the rivers. Such land, when cleared of the timber, will yield a succession of crops of wheat, barley, oats, Indian corn, potatoes, &c., equal in quality to the same produce raised in England. The soil is also well suited to the growth of hemp and flax, which could be produced there to any extent. Its natural advantages may be said to equal those of any portion of America, whether for agriculture or commerce, and there only need inducements offered to secure its prosperity. In this province they will find vast tracts of fertile land, valuable forests abounding with game, abundance of fish in the bays and rivers, mines of coal, iron, and copper, and numerous rivers and streams to carry its produce from the interior to the sea ports.

CULTIVATION.—When the settler has selected a farm amongst rich verdant lands as appears most desirable, he cuts down the trees on the site of his intended habitation, and those growing on the ground immediately adjoining, when the building is constructed in the most simple manner, by means of a succession of logs laid one on another; the spaces are closed with moss or clay, and the roof is covered with boards, or ribs of birch or spruce trees. In the centre of the cabin a square pit or cellar is dug, for the purpose of preserving potatoes or other vegetables during winter.

Many now settle, who have the means, build houses at first in a better style, but the majority of emigrants put up mere cabins for a few years, when all indications settlers may get a comfortable house erected. Previous to the cultivation of waste lands, the trees felled are set on fire, which consumes all the branches and small wood, and the logs are also piled in heaps and burnt, or rolled away for making a fence. If the ground is intended for grain, it is generally sown, without tilage, over the sand, and the seed covered in with a hoe, or narrow, sharp-toothed scythe, with much rude preparation, however, these successive great crops are raised without, indeed, any manure. Potatoes are planted, in new land, in round hollows, composed with the soil, 100 or 120 inches deep and about 1000 in circumference, in which these are sown and covered, and cover'd over with the top. Indian corn, pumpkins, cabbages, peas, and beans, are cultivated in new lands in the same manner as potatoes. Seeds of all kinds, including hemp, flax, and grass seeds, are now sown over the surface, and covered by means of a hoe, rake, or harrow. Wheat is usually sown in the same or the next year, without any manure, except manure from the crop, and the seed is scattered on the soil, which is about two years, the plough may be used, and the winter of hibernation which is now approached.

Let us see how encouraged by law alone, for individuals and trifling amounts, with facilities, have assisted in colonizing in New Brunswick, where those may be found who, in the period of a few years, by ingenuity and industry, have secured a good sum of £1000 to £2000, with but little labour cultivated, and established with houses, carts, cows, hogs, sheep, and goats, in 1000 or 1200 acres, a thriving business.

SMOKING.—The spring may be said to commence soon after the 1st of April, and the weather is generally dry, so it is difficult to ascertain exactly when the first smoke is seen. The nights are generally cold, and the days are warm, and the smoke of the first, second, and third days is very perceptible.

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smoke a day in winter but what may be performed in the open air. From the length of the autumn, the farmers have abundant time to plough all their lands, which, indeed, is the best season for American tillage.

Laws.—The government, institutions, and state of society, in New Brunswick are suited to the feelings and habits of people from the United Kingdom, and are a transcript of the constitution of England. No local laws can be enacted that are repugnant to the laws of England; nor the least tax on property, or duty on imported articles, be levied, except by the consent of the inhabitants, through their representatives.

Note.—Emigrants who may desire further information than we can find space for, may receive it, and also peruse the letters of emigrants to their friends, by applying at the offices of the company, 5, Castlehill court, London.

INSTITUTION OF CIVIL ENGINEERS.

MAY 9.—**THE PRESIDENT** in the chair.—No papers were read, and the evening was occupied by a renewed discussion on brick-making. A model of Mr. Hunt's machine for making bricks and tiles was exhibited, with several specimens of its produce; its action was described to be that the tempered clay was placed in a hopper, the front and back of which were formed by the peripheries of two drum wheels, covered by endless cloth webs, which, in descending, simultaneously carry down a continuous supply of clay of the exact length and width of a brick, while a frame is projected forward at given intervals, so as to determine and cut off the requisite thickness, which is received upon a pallet board, which is brought forward by an endless chain; this operation being constantly repeated, about 1200 bricks are made per hour, with the attendance of two men and three boys to feed the machine, to turn it, and to carry away the bricks. These bricks appeared to be more compact, and better formed, than those made by hand, and were stated to be one-eighth stronger.—A description was also given of the process invented by Mr. Prosser, for forming tiles, tesserae, &c., by compressing dry, and, finally, ground, clay, by means of hydrostatic pressure, into moulds, whence it was carried directly to the kiln, without any preparatory drying; the specimens exhibited, were very remarkable, they were very dense and equal throughout in texture, their edges were as sharp as if they had been chiseled; it was stated that a small hexagonal brick had withstood a pressure of thirty-five tons without crushing, and that a 9-inch brick, made by the same process, would bear ninety tons. The process has, up to the present time, been only used for making buttons and other small objects, with the exception of some tiles, or slabs, for being painted, but it was about to be extensively applied. An interesting discussion ensued, on the general mode of manufacturing bricks, going back as far as the construction of the brick Pyramids of Egypt, when the materials employed were aluminous sand and chopped straw; the Romans, who used finely levigated clay, made small thin bricks of greater density, and made the mortar for building a considerable length of time before it was used; the Dutch and other foreign bricks were also mentioned, as was the use of ashes in the making of bricks, near London, and it was stated that the reason of their use was that the material being loam rather than clay, the ashes gave it tenacity, and, at the same time, by burning slowly in the heart of the brick, a more equal amount of vibration was obtained, than could be by any other means, without pulverising such material.

The monthly ballot took place, when the following candidates were duly elected:—Messrs. A. Gréve and J. Chisholm, as members; Messrs. J. A. V. Barreius, A. Upward, G. B. Manis, and H. S. Lindsay, as associates. The meeting was then adjourned until Tuesday, May 9, when the following papers will be read:—“Observations on the Periodical Drainage and Replenishment of the Subterraneous Reservoir in the Chalk basin of London,” continuation of the paper read at the Institution, May 31st, 1842, by the Reverend J. C. Clutterbuck;—“Description of a Water-Meter,” by P. Carmichael;—“Description of Machines for Raising and Lowering Miners,” by J. Taylor, M. Inst. C. E.

AUSTRIAN LAW OF PATENTS.

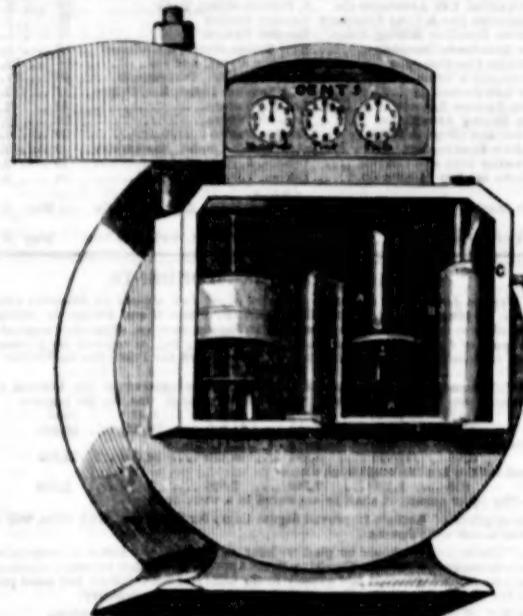
As the Austrian law of patents appears to be very little known in England, and, in consequence of such want of knowledge, comparatively few British inventors have availed themselves of the opportunity of protecting their inventions in that country, we think the following general information on the subject will be acceptable to our readers, and perhaps useful to future patentees. French inventors have more generally worked their patents in Austria, and with considerable success to themselves, while they have given a powerful impulse to the real inventive genius of the Austrian manufacturers.

By the first law on the subject, passed on the 8th of December, 1820, and which was granted by Francis I., any person, whether Austrian or foreigner, can legally become the proprietor of a patent, which extends over the following states:—Upper and Lower Austria, Bohemia, Moravia, and Illyria, Galicia, Lodomeria, and Illyria, including the duchies of Corinthia, Carniola, Salzburg, Styria, Silesia, the margravate of Moravia, and the principality of Tyrol. These different states contain manufactures of almost every kind, open a wide field for adventure, and are of the utmost importance to inventors and patentees. No patent is granted for meats, drinks, or medicines. Any foreigner desirous of a patent in Austria must obtain one first in another country, and the duration of the privilege will not exceed the time for which the foreign patent was granted, and in no case more than fifteen years. Full description must be given of the invention, written in the German language, and all concealment is strictly interdicted. The description can be kept secret, or entered in a public register, at the option of the patentee. The patent gives the privilege to the holder of opening as many establishments as he may think proper, in any part of the kingdom, for the manufacture and sale of the article invented, and the granting of licenses to others for its use. The expense of a patent for fifteen years (the longest time granted) is 60 florins—about £10.; and the shortest period (five years), fifty florins; and proportionate charges for intermediate periods. In addition to this there is a fee of three florins for engraving, the payment of stamp duties, and cost of inquiry. Patents are liable to forfeiture if the invention is not used, if it is shown to be identical with another patent, allowing one year to elapse without carrying the invention into effect, &c. In law suits, the ordinary Judges take cognizance of actions for infringement or counterfeit. For the first offence, an infringer is warned to abstain in future from the manufacture of the article, and, in case of repetition, he is fined 100 ducats for each offence—one half, and the counterfeit articles, to the patentee, and the other half to the poor of the district.

IRON HOUSES PROOF AGAINST EARTHQUAKES.—The complete journal which has attended the efforts of Mr. Lawcock in the construction of a pile of iron for Ryebrook, one of the African Kings—a description of which we give in our last—is likely to open a new and extensive field for the use of iron. Gentlemen connected with the West Indies have inspected this novel invention, not merely from curiosity, but with much higher motives. The disastrous effects of the earthquake in the West India Isles, particularly at Pointe à Pitre, in Guadeloupe, has drawn the attention of scientific men to the subject of building the new city in some manner that shall

THE "LAIDLAW" GAS-METER.

The importance of every subject connected with the correct admixture of gas, which has now become one of the absolute necessities of life, induces us to notice the peculiarity of the meter manufactured by Messrs. R. Laidlaw and Sons, of Glasgow. We need not offer any apology to our readers for again advertizing to the meter question, as, whatever tends to impart confidence between the gas manufacturer and the consumer, and to give mutual satisfaction, that a machine is in use on which they can both depend for a just and equitable admixture of the subtle fluid, must be, to both parties, a question worthy their most serious consideration. The great objections hitherto raised against the aqueous meter, are, not that a well-made and properly-regulated one, if rightly fixed, will not register the consumption of gas correctly when new, but that, from the corrosive properties of the products of coal gas, when in contact with water, the tin-plate case becomes completely rotten and leaky—the valves clogged, from the chemical union of the metals with the volatile parts of the gas, such as naphtha, ammonia, sulphurous acid, &c.—and the whole arrangement thus thrown out of order, and the measurement of the fluid more chance, sometimes telling for, and sometimes against, the consumer, and another principal objection to the water meter is, the continual variation of the water line, which continually alters the regularity of the measurement. In the meter manufactured by Messrs. Laidlaw this latter objection is completely set at rest, as, by a most simple contrivance, there can be no variation of the water line, if the most common attention is paid. The annexed figure represents a water meter, as manufactured by



these gentlemen, the only principal difference from others being in the facility of the water line. A A is a small kned pipe, connected with the water chamber, and uniting to a close cylinder, B, at the bottom; when the water chamber is filled to the proper water line, it runs off through the tube, A, and into the cylinder, B, until filled as high as C; at C is placed a spout, or drip, projecting beyond the meter, which, as the water is increased in the chamber, by condensation or otherwise, it continually runs off—thus preventing the possibility of an overplus, the water in the tube and cylinder always acting as a seal upon the gas, and thus affording to the consumer the most satisfactory and effectual protection. We believe that ever since the meter was first brought into use, those produced by the Messrs. Laidlaw always bore a high name among consumers of gas, and for twelve years past they have manufactured meters on the above principle, with cast-iron cases, and all the internal parts of great strength and durability, the advantages attendant upon which is the great length of time such a meter will last, when compared with a case made of sheet or tinned iron. One principal cause of complaint, as before observed, being the effects of corrosion of the thin wrought metal, induced the adoption of cast-iron, and they are now enabled to produce a gas-meter, correct in its registration of the quantity consumed, durable beyond anything of the kind before manufactured, with but little excess in weight, and not exceeding in price the other descriptions of meters.

PROPOSED TUNNEL FROM DOVER TO CALAIS.—The complete success which has attended Sir M. J. Brunel, in that great undertaking, the tunnel under the Thames, has, as was expected, created new ideas, and already we hear of a magnificent engineering plan for a tunnel under the straits of Dover, to unite this country with France by a land communication. Though, at first sight, such proposition may appear romantic, or even preposterous—with so many superb specimens of engineering skill as this and other countries can now produce, accomplishing what was always previously deemed impossible—we must not hastily assert that such an undertaking can not be achieved. It is true it is a subject not to be approached without deep consideration and vast engineering foresight and preparation, for the many difficulties which must happen; but with a strata (chalk) so peculiarly adapted for tunnelling, and that is not part of the passage across is the depth so great as to present insurmountable impediments, we do not hesitate to assert that even this gigantic proposition is within the power of man to accomplish. The most difficult part of the operation would be on the French coast, where the depth of the coast is far more considerable than on our own, or in the middle. We shall anxiously await the occurrence of any particulars in connection with the scheme, and which shall receive our best attention.

OPENING OF THE PARIS AND ORLEANS RAILWAY.—The opening of this line took place on Tuesday, the 20 instant, although on one line of the rails a small portion is incomplete. Four trains, containing together nearly 1,000 persons, started in succession, from half past six to a quarter past eight in the morning, the bands of the 2nd regiment of the line, and of the 3d regiment of dragoons, playing rattling airs. The Duke de Nemours and Montpessier, attended by a brilliant staff, accompanied by the Minister of the Interior, Commerce, and Public Works, inspected every part of the Paris station, and started by a special train, and accompanied by about 100 distinguished passengers, at a quarter past eight, and arrived at Orleans at half past one o'clock. The Bishop of Orleans and his clergy, accompanied by the Prince, civil and military authorities, and the public, then went in procession to present a blessing on the road, at a shelter erected for the ceremony, after which the parties invited proceeded to the Orleans station, where a room had been elegantly fitted up, and prepared of an excellent audience, which was provided for 100 persons. The first train started on its return to Paris at three o'clock, but a slight accident, which displaced some of the rails, detained the others, and the Prince did not start until five o'clock, arriving at Paris at twenty minutes past nine. There is no tunnel in the whole length, but several splendid engineering works attest the solidity of the undertaking; there are 100 roads, lanes, and paths, of various descriptions, crossing the line on a level with the rails; 100 pass under it, including rivers, rivulets, ditches, &c., and thirty-five are constructed over it, in the shape of bridges, aqueducts, &c. This railway passes through a populous and highly fertile country, hence the fast progress of the great line to the Spanish frontier, the south of France, &c., and will, no doubt, render important advantages to the inhabitants of the districts through which it passes.

RAILWAYS IN IRELAND.—As we announced last week, a meeting, called by public advertisement, took place at the Thatched House Tavern, Saint James's-street, London, on Wednesday, to consider the expediency of reviving the project of a railway between Dublin and Cork, and of applying to Government for the establishment of a company to construct any line recommended by the late railway commissioners. The meeting was out of an interview held with Sir Robert Peel, but upon which occasion the Premier distinctly disapproved of the particular plan which was then proposed, though he equalled his mortal aversion upon the general subject of the construction of railways in Ireland. The meeting was expected to consist of Irish Peers and Members of Parliament, but at considerably past the appointed hour Lord Mornington, Chichester, Mountnorris, Berwick, Clare, and Courtney, with Captain Hutton and Acton, only were present to constitute the meeting, from which the public press was entirely excluded.

MINEWORKS OF FRANCE.—From returns just published, we find that total annual quantity of copper was imported into that country during the month of March last, of cast-iron, 20,000; of steel, 1,400,000; of lead, 11,000; and of zinc, 10,000.

LECTURES ON MINERALOGY—No. I.

BY PERCIVAL N. JOHNSON, ESQ.

A series of three highly interesting and instructive lectures on the above subject was given, some time since, by Mr. P. N. Johnson, at the City of London Library Institution, which, as containing much useful and interesting matter, we consider will be acceptable to our readers; at the same time, that, while we attempt a full elucidation of the subjects upon which they treat, it must be understood some license has been taken in the arrangement of the several points canvassed. They consist of—first, the geological character of the rocks in which metallic minerals are found, the methods of working mines, and dressing the ores; and, secondly, the reduction of these ores by smelting, and other means for their metallic contents, and their various applications to the arts.

The lectures commenced by a description of the rocks in which metallic deposits are found, which are in the primitive and others in the secondary series, the most productive being clay slate, mica-schist, gneiss, primitive or transition limestone, and in granite; but, in this latter rock, its productivity depends upon its contiguity to some of the before-mentioned strata. The formation of metallic lodes have been speculated on by many, some considering them produced by the agency of fire, others by a solution of their component parts, and being then attracted by the immediate adjacent strata. They are fissures in the rocks, and not contemporaneous with them, but eventually filled up after these rocks have been formed. He then described the run and bearing of the veins, their inclination or dip—stating that those which have an east and west bearing are invariably most productive. When veins are intersected by lodes taking a different direction, or, as they are termed, cross-courses, they are frequently "bove," or thrown out of their direction, from a few inches to many fathoms. As Nature shows her disposition on a small scale, precisely the same as in her grander and more extensive operations, the lecturer said he could not better explain the effect and appearance in subterranean operations, than by calling attention to a specimen of veined marble, which he exhibited, and which showed a complete system of lodes and cross-courses, veins, &c., precisely the same as those capable of being worked as mines, &c. The productivity of metal appears much to depend on its intermixture, or contiguity to rocks or mineral substances of a different nature than that in which the lode exists, to instances which our most productive mines are in the junction of granite and clay slate, and where porphyry courses, called veins, are near, or form one side or wall of the lode. This fact has led several scientific men to make experiments, to ascertain whether there are any electric currents constantly in action in metalliciferous veins, and which the lecturer considered had been proved beyond a doubt; but whether these electric currents are produced from the decomposition of the substances already formed, or are the acting agents in the formation of the deposits, he feared the life of man would be too short to prove. He then proceeded to show the distinction between these veins and other deposits of metals which lay in a more horizontal direction, and which may be more properly termed beds, as in the case of argillaceous iron ore, in horizontal strata, alternating with the coal and limestone, and the lead deposits of the western districts of Yorkshire and other localities. Manganese also, although taking certain points for some distance, can scarce be considered in the light of regular lodes, as the sides or walls of the formation are not well defined. In regular veins, with well defined walls, the increased value of the metallic contents is occasioned by what is termed rust, or bunches of ore. In alluding to the various ways in which the discovery of lodes had been made, he observed that, in some, the walls of the lode being of a harder nature (as porphyritic stone) than the strata in which they exist, and thus notwithstanding the effects of time and decomposition, are seen projecting beyond the embankment rock; sometimes they are found by the plough turning up masses of ore from the thinly-covered rock, and more frequently from observing a ferruginous line traversing the strata, which is an earth, formed by the decomposition of iron pyrites, and is called gossan—no mine, indeed, being considered worth prosecuting unless this mineral is found. On the precipitous sides of rocks on the coast, fissures have been found, terminating in metallic veins, and, on some occasions, the ignis fatua, or jack o'lantern, has been the cause of the discovery of lodes. The lecturer stated that he had himself seen, on a clear dark night, a phosphorescent light playing over the spots where mineral veins exist. He then noticed the superstitious practice of the use of the "divining rod," and said that, although, in the present enlightened age, many persons would ridicule the idea of what it must be admitted could not be explained, yet, in the course of twenty-eight years' experience in mining matters, he had never known an experienced practical miner who altogether denied its properties. 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Having given a clear description of the various modes adopted, according to circumstances, of following the course of lodes, the manner of unwatering mines, sinking winches, &c., and the several modes agreed upon between the captain and the working miners for working, such as turnwork, tribute, &c., he next called the attention of his auditory to the different methods of dressing and preparing the ore for the smelting furnace, or other means of reduction. He described the method adopted at the Parys Mine, in the Isle of Anglesea, for the extraction of sulphur from iron pyrites, containing almost 54 per cent. After being broken up, the ore is screened through sieves of different meshes, from two or three inches to small dust; a pit is dug two to fifteen inches deep, and a wall built two feet high in front, leaving three or four apertures, a back wall five to six feet high, and the sides sloping to the front; the largest pieces of pyrites are then laid at the bottom, until nearly even with the ground, a few faggots of wood and a basket of coal are placed at each aperture, and the pyrites filled in up to the height of the walls and sides, the finest sifted being at the top; this is then covered with wet clay, to prevent adhesion of air. From the back wall of this pile there are horizontal rows of five or six feet, communicating with a chamber of corresponding capacity with the pile of ore; this chamber is built of bricks, and on one side none are left loose, for the purpose of now and then clearing out the deposited sulphur, which collects in a fine state of division. The size of this chamber varies from ten to twenty feet, by six to twelve feet, and contains from 100 to 200 tons of sulphur, burning from three to six months, the cracks on the clay over the fire being carefully closed as they occur. The ore of iron which are found in a considerable state of purity require but little dressing. Manganese being only used, and valuable as a mineral, from the proportion of oxygen it contains, requires great care and cleanness in "clearing," as manganese dressing is termed. The portion of the ore in the state of the pyrite is the valuable part, and, according to the nature of the ore, may be more or less in a state of pulverization, requiring exceedingly moist or less water, as great care must be taken that the finer parts are not washed away, as not only is anything lost in the shape of a per cent. of no value, but, should the carbuncle get among it, the carbon would unite with the oxygen, forming carbonic acid, and in proportion injure its value, which varies from 10 to 15 per cent. In the dressing of tin, after cleaning and sifting, the ore are stamped, and go through a process called "buddling," in which the powdered oxide, or "black tin," i.e., by its great specific gravity (7.0), separated from the earthy matrix; it then undergoes the operation of "packing," which is performed by one man always keeping in motion from 100 to 150 gallons of water in a large tub, while another man drops in the black tin a shovel full at a time, continually working outside; by this means the richest part subsides, while the poorer forms at the top, which is removed, and passed again through the same processes, and, if mixed with copper or arsenic, is fit for market, otherwise it is calcined or heated for some hours in a reverberatory-furnace. Molybdenum, tungsten, thiomolybdate, vanadium, and antimony, were next mentioned, which are separated from the matrix by hand; manganite, arsenic, cobalt, and nickel, being always found blended with other ores, are separated in their preparation. The process of dressing copper ore was then described, and to which we shall direct attention in our next Number.

NEW DRAFFING MACHINE.—We lay before our readers the following extract from the *Globe Times* (George Town, Tasmania). The machine referred to, as having been applied so successfully to that colony, is also applicable to the draining of lands generally, and was planned and executed at the engineering establishment of John Higley, Esq., Hawarden, Flintshire, North Wales:—Mr. Higley, one of our best practical engineers, has completed a machine for draining Campion's estate, on the Mawddan Creek. It is in operation, and answers the purpose admirably. There is a circle whose diameter the water to be drained off, is very gradually determined on, into a brick channel, in which, as in a pump, moves a wheel, which, divided into basket-like compartments, raises the water, and throws it into an apartment, that may be of any length, and may run over the top of one another. Every compartment, and actual experiment, proves that the machine, which may be worked, without difficulty, by the engine of the paper-mills, can drain any estate, however discontinuously situated. We understand the drainage operations on the said estate to interest the Chancery court, and safety guaranteed.

GEOLOGY OF EGYPT.

In an interesting paper on the short subject (by Lieut. Newbold, F.R.S.), the author considers the natural boundaries of Egypt to be the Mediterranean on the north, the Lybian desert on the west, the mountains of Nubia on the south, and the Red Sea with the latitudes of Suez on the east; and this area, comprising 100,000 square miles, he divides into three great physical divisions:—1. The mountainous region, extending between the Red Sea and the Nile; 2. The deserts east and west of the Nile; and 3. The fertile valley of that river, with its delta. After describing the dreary aspect of the mountainous region, which presents bare or sand-covered rocks, intersected by deep ravines, he states the greatest altitude of the desert between Suez and Cairo to be 700 feet above the sea; while the flat marshy district between Suez and Port Said is twenty-four feet below the sea level. The oasis he considers merely valleys in the sand accumulations, supplied with moisture from the surrounding seas, and held up by a substratum of impervious clay. The natural drainage of the country is remarkably simple; the greater portion of the little rain which falls in central and upper Egypt is absorbed by the sand, and collected in the oases; the remainder is carried off by evaporation, or conducted to the sea by creeks in the strata. The amount of water which escapes, is, however, so small, that the Nile, throughout the last 1,300 miles of its course, or about one-half its entire length, receives not a single tributary stream.—The author then describes the various formations, consisting of—1. Hypogene rocks, with argillaceous schist; 2. Breccia di verde; 3. Lower sandstone; 4. Marine limestone; 5. Upper sandstone; 6. Post-pliocene deposits; 7. Drift; 8. Volcanic rocks; 9. Alluvial accumulations; and 10. Sand-drifts.

1. Hypogene rocks compose a small portion of Egypt; they rest on granite and form a zone thirty miles in breadth, between the Red Sea and the Nile; dykes, or masses, of basalt, greenstone, porphyry, and serpentine, abound; and the numerous schists produce emeralds, avaravite, hematite, and specular iron. 2. The argillaceous slate is overlaid by the celebrated breccia di verde, composed principally of angular and rounded fragments of greenstone, porphyry, argillaceous and flinty schist, serpentine, and marble, with a light green compact felspar, cemented by a slightly calcareous paste of various shades of green and reddish purple; no fossils are found in this formation. 3. Lower sandstone—varies from a loose siliceous aggregate, with a siliceous calcareous or ferruginous cement, to a compact quartz rock; it is often associated with thin beds of green and purple clay, and amethystine quartz traverses it; this stone was much used by the ancients in their sculptures. 4. Marine limestone.—The sandstone is overlaid conformably by a marine limestone, which covers the greater part of Egypt; the upper beds abound with ammonites; the lower beds yield crystallized gypsum, chlorite of sodium, aragonite, alabaster, sulphate of barite, lead, crystallized sulphur, and nodules of carbonized vegetable matter. 5. Upper sandstone.—This formation occurs in horizontally stratified patches, resting on the marine limestone, and has been traced from the Mediterranean across the deserts, even into Abyssinia; such numbers of trunks and fragments of siliceous trees are found, that a part of the Soek desert, seven miles from Cairo, is called the petrified forest; it consists of a sterile irregular plateau, considerably above the level of the Nile, extending south three and a half miles, and four miles eastward; many are scattered over the surface, among rolled and angular fragments of dark grit and pebbles of jasper, chert, quartz, and sharp-edged fragments of siliceous wood; the majority of the largest trees lie towards the north-west; two of the largest, measured by Mr. Newbold, were forty-eight and sixty-one feet in length, and two and a half and three feet in diameter; among the fragmental trunks many pieces were found with the edges sharp and fitting nicely, though several feet asunder; a few specimens are found embedded in the sand, and still fewer in a vertical position, rising from twelve to twenty inches above the surface; Mr. Newbold cleared away the sand from one of these, and found it fixed in the subjacent conglomerate, but devoid of roots. From the appearances of this fossil forest and the adjacent district and valleys, he is of opinion that this part of Egypt has twice formed the bed of the ocean, and twice been elevated above the surface of the water; that the fossil trees lived between these periods, when they were drifted into the ocean, and covered up by a bed of loose sand, and afterwards raised to their present position. From the little worn aspect of the trunks, and the nice adaptation of the fractured parts, it is conjectured that they were silicified at least at no great distance from the spot; but, as no signs of roots can be traced, Mr. N. hesitates to agree in the hypothesis that this is the site of a submerged forest. 6. Post-pliocene deposits are a range of strata on the shores of the Red Sea, composed of calcareous deposits, containing testacea, radiaria, and corals. 7. Drift.—The saline sand and gravel of the deserts, derived in great parts, he believes, from the fossil wood sandstone formation, and the gravel beds, which cover the raised coral beach of the Red Sea. 8. Volcanic rocks.—The trap and porphyry dykes of upper Egypt, penetrating all the rocks, from the lower sandstone to the granite. 9. Alluvial accumulations.—The mud of the Nile and its delta; the flood of this mud is generally dark brown, highly calcareous, retentive of moisture, effervescent, and fuses, *per se*, into a greenish glass; the annual deposit varies in thickness from an inch to a few lines, and each layer may be separated from the rest; in upper Egypt the whole thickness of this deposit is forty feet, in middle Egypt thirty feet, and at the open of the delta eighteen feet. 10. Sand-drifts.—Mr. Newbold closes his description with a notice of the dunes or hills of sand which stud the shores of the Red Sea and the Mediterranean, chiefly derived from the drifting of sand-banks, thrown up by the river.

GEOLOGY OF THE NEIGHBOURHOOD OF BAYONNE.

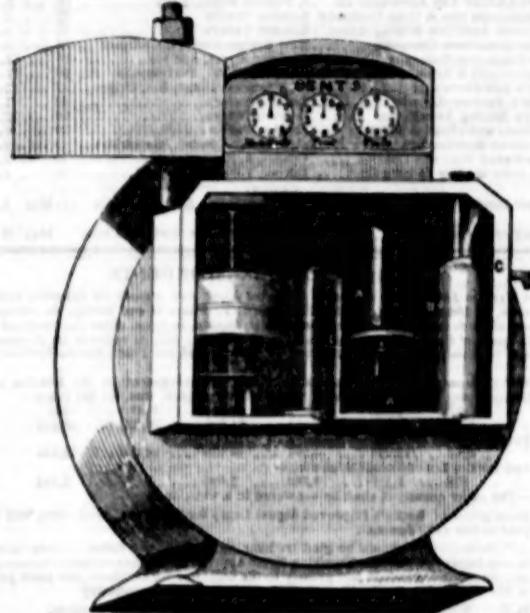
In a paper, read by Mr. Pratt, F.G.S., at the Geological Society, an account was given of a remarkable deposit in the neighbourhood of Bayonne, referred by French geologists to the upper part of the cretaceous system. It is many hundred feet in thickness, more or less highly indurated, and resting, as far as the disturbed state of the district will admit of a determination, nearly conformably upon well characterized cretaceous strata. The whole has, apparently, been elevated by the same cause which has disturbed the cretaceous beds in the neighbourhood. It contains numerous fossils, the greater part of which are tertiary, a few referable to cretaceous forms, and several new or indefinite. The mineralogical character of this deposit differs greatly from any known tertiary or cretaceous system, approaching more nearly the plastic clay; and, in its upper part, apparently covered by it. On the other hand, the existence of some cretaceous species among its fossils, the doubtful character of others, and the nearly conformable position and high induration of its strata, oversimplifying the chalk over, seem to connect it with the cretaceous system. Mr. Pratt describes, in detail, the sections of this deposit, seen on the sea coast, in the neighbourhood of Biarritz, where the cliffs vary from twenty to eighty feet in height. The strata are much disturbed, and there are several faults. In places, the intrusion of igneous rocks has converted an impure limestone into a hard crystalline marl, or dolomite. The organic remains differed in different localities, but Mr. Pratt found certain species common to all the beds. The fossils therein found differ likewise, however, from those which occur in the cretaceous beds by which they are surrounded. The latter have much the appearance of chalk marl, and form cliffs varying from fifty to 100 feet in height. Mr. Pratt gives lists of the fossils found by him in this interesting deposit. Several of these, referred by French geologists to cretaceous species, he found, on comparison, to be definitely tertiary. He remarks that, though there is a gradual change of species in the organic remains, from the first rise of the strata to their termination, certain marls and shales continue throughout, and the change is not greater than might be expected, considering the variety in the mineralogical character of the beds. He concludes by observing, that this extensive deposit, the characters of which are, on the whole, tertiary, and which, probably, may be placed earlier in the series than any described cretaceous beds (unless we except the Diaboliens and some other deposits allied to them in position and fossil characters), has been elevated at a period posterior to the chalk.

IRONSTONE DISCOVERIES.—A circumstance of much interest has just occurred in the neighbourhood of Gwiliard Town, in connection with the sand-beds which form an extensive basin on the slopes. Gwiliard and Gwiliard Towns are nearly four miles long and about half a mile wide, and form a continuation of sand-beds, some of which are forty feet high. Tradition says that they all come from the sea-shore, the sand being blown inland by successive gales, and accumulating for thousands of years. There is no doubt that much valuable land has been lost under such circumstances. About two years ago, Upton Farm lay just at the edge of some of the Gwiliard sand-beds as they stand, when the sand accumulated, drove on one side, then on another, till the whole estate was destroyed, and nothing remained but the farm house. At last, a heavy gale caused clouds of sand to sweep over the house, and buried that side, the inmates having been just able to escape with their lives. Two hundred acres have been ploughed, and where the fields have been cultivated, nothing has been visible but large heaps of sand-beds, which, from the name of the estate they cover, are known by the name of Upton Town. From the great value of sand as manure, for it contains about 20 per cent. of calcium of lime, thousands of tons are raised every year. Last week, no sand persons were filling their carts, they observed the absence of Upton Farm-houses. The land, of course, is untenanted, but it is very probable that most of the houses will be left open, as the interest of such a discovery will induce the owners to work upon this spot—Cornwall Gazette.

PLATE-MANUFACTURE IN IRELAND.—We perceive, from our shipping list, that the arrangements for the transmission of raw materials required for plate manufacture, are now placed on a permanent footing, and that importations are arriving hence by every vessel. Regarding the introduction of this last, as we understand from our naval authorities, we have much pleasure in recording the progress of the manufacture in the principal manufacturing districts—Dublin and Cork.

THE "LAIDLAW" GAS-METER.

The importance of every subject connected with the correct admeasurement of gas, which has now become one of the absolute necessities of life, induces us to notice the peculiarity of the meter manufactured by Messrs. R. Laidlaw and Son, of Glasgow. We need not offer any apology to our readers for again advertizing to the meter question, as, whatever tends to impart confidence between the gas manufacturer and the consumer, and to give mutual satisfaction, that a machine is in use on which they can both depend for a just and equitable admeasurement of the subtle fluid, must be, to both parties, a question worthy their most serious consideration. The great objections hitherto raised against the aqueous meter, are, not that a well-made and properly-regulated one, if rightly fixed, will not register the consumption of gas correctly when new, but that, from the corrosive properties of the products of coal gas, when in contact with water, the tin-plate case becomes completely rotten and leaky—the valves clogged, from the chemical union of the metals with the volatile parts of the gas, such as naphtha, ammonia, sulphurous acid, &c.—and the whole arrangement thus thrown out of order, and the measurement of the fluid mere chance, sometimes telling for, and sometimes against, the consumer, and another principal objection to the water meter is, the continual variation of the water line, which as continually alters the regularity of the measurement. In the meter manufactured by Messrs. Laidlaw this latter objection is completely set at rest, as, by a most simple contrivance, there can be no variation of the water line, if the most common attention is paid. The annexed figure represents a water meter, as manufactured by



these gentlemen, the only principal difference from others being in the fixity of the water line. A A is a small kned pipe, connected with the water chamber, and uniting to a close cylinder, B, at the bottom; when the water chamber is filled to the proper water line, it runs off through the tube, A, and into the cylinder, B, until filled as high as C; at C is placed a spout, or drip, projecting beyond the meter, which, as the water is increased in the chamber, by condensation or otherwise, it continually runs off—thus preventing the possibility of an overplus, the water in the tube and cylinder always acting as a seal upon the gas, and thus affording to the consumer the most satisfactory and effectual protection. We believe that ever since the meter was first brought into use, those produced by the Messrs. Laidlaw always bore a high name among consumers of gas, and for twelve years past they have manufactured meters on the above principle, with cast-iron cases, and all the internal parts of great strength and durability, the advantages attendant upon which is the great length of time such a meter will last, when compared with a case made of sheet or tinned iron. One principal cause of complaint, as before observed, being the effects of corrosion of the thin wrought metal, induced the adoption of cast-iron, and they are now enabled to produce a gas-meter, correct in its registration of the quantity consumed, durable beyond anything of the kind before manufactured, with but little excess in weight, and not exceeding in price the other descriptions of meters.

PAPPOSED TUNNEL FROM DOVER TO CALAIS.—The complete success which has attended Sir M. I. Brunel, in that great undertaking, the tunnel under the Thames, as was expected, created new ideas, and already we hear of a magnificent engineering plan for a tunnel under the straits of Dover, to unite this country with France by a land communication. Though, at first sight, such proposition may appear romantic, or even preposterous—with so many superb specimens of engineering skill at this and other countries can now produce, accomplishing what was always previously deemed impossible—we must not hastily assert that such an undertaking can not be achieved. It is true it is a subject not to be approached without deep consideration and vast engineering foresight and preparation, for the many casualties which must happen; but with a strata (shale) so peculiarly adapted for tunnelling, and that is no part of the passage narrow, the depth so great as to present insurmountable impediments, we do not hesitate to assert that even this gigantic proposition is within the power of man to accomplish. The most difficult part of the operation would be on the French coast, where the depth of the ocean is far more considerable than on our own, or in the middle. We shall anxiously await the occurrence of any particulars in connection with the scheme, and which shall resolve our best attention.

OPENING OF THE PARIS AND ORLEANS RAILWAY.—The opening of this line took place on Tuesday, the 31 instant, although on one day of the entire a small portion is incomplete. Four trains, containing together nearly 1,000 persons, started in succession, from half past six to a quarter past eight in the morning, the bands of the 3d regiment of the line, and of the 3d regiment of dragoons, playing saluting airs. The Duke de Nemours and Montpensier, attended by a brilliant staff, accompanied by the Minister of the Interior, Commerce, and Public Works, inspected every part of the Paris station, and started by a special train, and accompanied by about 200 distinguished passengers, at a quarter past eight, and arrived at Orleans at half past one o'clock. The Bishop of Orleans and his clergy, accompanied by the Prince, civil and military authorities, and the public, then went in procession to pronounce a blessing on the road, at an altar erected for the occasion, after which the parties invited proceeded to the Orleans station, where a room had been elegantly fitted up, and provided of an excellent audience, which was provided for 150 persons. The first train started on its return to Paris at three o'clock, but a slight accident, which dislodged some of the rails, detained the others, and the Prince did not start until five o'clock, arriving at Paris at twenty minutes past nine. There is no tunnel in the whole length, but several splendid engineering works attest the solidity of the workmanship: there are 200 roads, lanes, and paths, of various descriptions, crossing the line on a level with the rails; 100 piers under it, including rivers, rivulets, ditches, &c., and thirty-five are constructed over it, in the shape of bridges, aqueducts, &c. This railway passes through a populous and highly fertile country, forms the first portion of the great line to the Spanish frontier, the seat of Empire, &c., and will, no doubt, render important advantages to the inhabitants of the districts through which it passes.

RAILWAYS IN IRELAND.—As we announced last week, a meeting, called by public advertisement, took place at the Thatched House Tavern, Saint James's-street, London, on Wednesday, to consider the expediency of reviving the project of a railway between Dublin and Cork, and of applying to Government for the establishment of a company to construct any line recommended by the late railway commissioners. The meeting arose out of an interview had with Mr. Robert Peel, but upon which occasion the Premier decidedly disapproved of the particular plan which was then proposed, though he signified his cordial approbation upon the general subject of the construction of railways in Ireland. The meeting was expected to consist of Irish Peers and Members of Parliament, but at considerably past the appointed hour Louis Montagu, Chichester, Bury, Berwick, Clare, and Connaught, with Captains Hutton and Arden, only were present to constitute the meeting, from which the public press was entirely excluded.

MINEWORKS OR FRANCE.—From reliable, just published, we find that total output of copper wire imported into that country during the month of March last, of cast-iron, 38,364; of cast, 1,400,000; of lead, 11,000, and of zinc, 14,000.

LECTURES ON MINERALOGY—No. 1.

BY FREDERICK W. JOHNSON, ESQ.

A series of three highly interesting and instructive lectures on the above subject was given, some time since, by Mr. P. N. Johnson, at the City of London Library Institution, which, as containing much useful and interesting matter, we consider will be acceptable to our readers; at the same time, that, while we attempt a full elucidation of the subjects upon which they treat, it must be understood some license has been taken in the arrangement of the several points canvassed. They consist of—first, the geological character of the rocks in which metallic minerals are found, the methods of working mines, and dressing the ores; and, secondly, the reduction of these ores by smelting, and other means for their metallic contents, and their various applications to the arts.

The lecturer commenced by a description of the rocks in which metallic deposits are found, which are in the primitive and others in the secondary series, the most productive being clay slate, mica slate, gneiss, primitive or transition limestone, and granite; but, in this latter rock, its productiveness in metal depends upon its contiguity to some of the before-mentioned strata. The formation of metallic lodes have been speculated on by many, some considering them produced by the agency of fire, others by a solution of their component parts, and being then attracted by the immediate adjacent strata. They are fissures in the rocks, and not contemporaneous with them, but evidently filled up after these rocks have been formed. He then described the run and bearing of the veins, their inclination or dip—stating that those which have an east and west bearing are invariably most productive. When veins are intersected by lodes taking a different direction, or, as they are termed, cross-courses, they are frequently “hove,” or thrown out of their direction, from a few inches to many fathoms. As Nature shows her disposition on a small scale, precisely the same as in her grander and more extensive operations, the lecturer said he could not better explain the effect and appearance in subterranean operations, than by calling attention to a specimen of veined marble, which he exhibited, and which showed a complete system of lodes and cross-courses, veins, &c., precisely the same as those capable of being worked as mines, &c. The productiveness of metal appears much to depend on its intermixture, or contiguity to rocks or mineral substances of a different nature than that in which the lode exists, to instances which our most productive mines are in the junction of granite and clay slate, and where pyrophyre courses, called veins, are near, or form one side or wall of the lode. This fact has led several scientific men to make experiments, to ascertain whether there are not electric currents constantly in action in metalliferous veins, and which the lecturer considered had been proved beyond a doubt; but whether these electric currents are produced from the decomposition of the substances already formed, or are the acting agents in the formation of the deposits, he feared the life of man would be too short to prove. He then proceeded to show the distinction between these veins and other deposits of metals which lay in a more horizontal direction, and which may be more properly termed beds, as in the case of argillaceous iron ore, in horizontal seams, alternating with the coal and limestone, and the lead deposits of the western districts of Yorkshire and other localities. Manganese also, although taking certain points for some distance, can scarce be considered in the light of regular lodes, as the sides or walls of the formation are not well defined. In regular veins, with well defined walls, the increased value of the metallic contents is occasioned by what is termed runs, or bunches of ore. In alluding to the various ways in which the discovery of lodes had been made, he observed that, in some, the walls of the lode being of a harder nature (as pyrophyre stone) than the strata in which they exist, and thus notwithstanding the effects of time and decomposition, are seen projecting beyond the surrounding rock; sometimes they are found by the plough turning up masses of ore from the thinly-covered rock, and more frequently from observing a ferruginous line traversing the strata, which is an earth, formed by the decomposition of iron pyrites, and is called gossan—no mine, indeed, being considered worth prosecuting unless this mineral is found. On the precipitous sides of rocks on the coast, fissures have been found, terminating in metallic veins, and, on some occasions, the spot *fauve*, or jack o'lantern, has been the cause of the discovery of lodes. The lecturer stated that he had himself seen, on a clear dark night, a phosphorescent light playing over the spots where mineral veins exist. He then noticed the superstitious practice of the use of the “divining rod,” and said that, although, in the present enlightened age, many persons would ridicule the idea of what it must be admitted could not be explained, yet, in the course of twenty-eight years’ experience in mining matters, he had never known an experienced practical miner who altogether denied its properties. This instrument is merely the sucker, or one year’s shoot, of the hazel or apple tree, which are the woods generally used, though it is said other wood will answer the purpose; it is about three feet long, held in the hand in a peculiar manner, the holder steadily pacing the ground, and, when he passes over a metalliferous deposit, or mineral spring, the rod will bend downwards. He then proceeded to notice those operations called stream works, the principal metalliferous stones streaming for being gold and tin; of the latter metal the stream works in Cornwall have evidently been the great source of production to the ancient Phoenicians and Romans, their rough tools having often been discovered in them; they consist of accumulations of water worn nodules of various sizes, found in low grounds, which have formerly been the beds of rivers, and have been gradually filled up by the debris of surrounding higher ground, traversed by metallic lodes. Having given a clear description of the various modes adopted, according to circumstances, of following the course of lodes, the manner of surveying miners, sinking winches, &c., and the several modes agreed upon between the captain and the working miner for working, such as tail-work, tribute, &c., he next called the attention of his auditory to the different methods of dressing and preparing the ore for the smelting furnace, or other means of reduction. He described the method adopted at the Parry Mine, in the Isle of Anglesea, for the extraction of sulphur from iron pyrites, containing about 34 per cent. After being broken up, the ore is screened through sieves of different meshes, from two or three inches to small dust; a pit is dug twelve to fifteen inches deep, and a wall built two feet high in front, having three or four apertures, a back wall five to six feet high, and the sides sloping to the front; the largest pieces of pyrites are then laid at the bottom, until nearly even with the ground, a few faggots of wood and a bushel of coals are placed at each aperture, and the pyrites filled in up to the height of the walls and sides, the fuel sifted being at the top; this is then covered with wet clay, to prevent adhesion of air. From the back wall of this pile there are horizontal fissures of five or six feet, communicating with a chamber of corresponding capacity with the pile of ore; this chamber is built of bricks, and on one side none are left loose, for the purpose of now and then clearing out the deposited sulphur, which collects in a fine state of division. The size of this chamber varies from ten to twenty feet, by six to twelve feet, and contains from 100 to 200 tons of mineral, burning from three to six months, the cracks on the clay over the fire being carefully closed as they occur. The ore of iron which are found in a considerable state of purity require but little dressing. Manganese being only used, and valuable as a mineral, from the proportion of oxygen it contains, requires great care and nicely in “cleaning,” as manganese dressing is termed. The portion of the ore in the state of the pyrite is the valuable part, and, according to the nature of the ore, may be more or less in a state of pulverization, requiring accordingly more or less water, as great care must be taken that the finer parts are not washed away; as not only is anything not in the shape of a particle of no value, but should the carbonate get among it, the carbon would unite with the oxygen, forming carbonic acid, and in proportion injure its value, which varies from 31. to 15. per cent. In the dressing of tin, after cleaning and sorting, the ore is stamped, and go through a process called “buddling,” in which the powdered oxide, or “black tin,” i.e., by its great specific gravity (7.0), separated from the earthy matter; it then undergoes the operation of “panning,” which is performed by one man always keeping in operation from 100 to 150 gallons of water in a large tub, while another man carefully drops in the black tin a shovelful at a time, continually working outside; by this means the richest part remains, while the poorer forms of the tin, which is removed, and passed again through the same processes, and, if not mixed with copper or arsenic, is fit for market, otherwise it is reduced or heated for some hours in a reverberatory-furnace. Molybdenum, tungsten, titanium, niobium, columbium, and tantalum, were next considered, which are separated from the matrix by hand; bismuth, arsenic, cobalt, and nickel, being always found blended with other ores, are separated in their preparations. The process of dressing copper ores was then described, and in which we shall direct attention in our next Number.

NEW DRAWDOWN MACHINES.—We lay before our readers the following extract from the *Glasgow Times* (George Town, Glasgow). The machine referred to, as having been applied to commercially in that colony, is also applicable to the drawing of leads generally, and was planned and executed at the engineering establishment of John Right, Esq., Hawickham, Fleetwood, North Wales:—“Mr. Right, one of our best practical engineers, has completed a machine for drawing Crampton’s estate, on the Makin’s Creek. It is in operation, and answers the purpose admirably. There is a slot which transmits the water to be drained off, in any quantity determined on, into a wheel channeled, in which, as in a pump, moves a wheel, which, divided into broad-like compartments, raises the water, and throws it into an aqueduct, that may be of any length, and may run over the top of any elevation. These negotiations, and actual experience, prove that the machine, which may be worked without difficulty, by the engine of the sugar-mills, may draw any estate, however circumstantially situated. We recommend the interested owners on the east coast to import the Crampton estate, and nothing more.”

GEOLOGY OF EGYPT.

In an interesting paper on the above subject (by Lieut. Newbold, F.R.S.), the author considers the natural boundaries of Egypt to be the Mediterranean on the north, the Lybian desert on the west, the mountains of Nubia on the south, and the Red Sea with the isthmus of Suez on the east; and this area, comprising 100,000 square miles, he divides into three great physical divisions:—1. The mountainous region, extending between the Red Sea and the Nile; 2. The deserts east and west of the Nile; and 3. The fertile valley of that river, with its delta. After describing the dreary aspect of the mountainous region, which presents bare or sand-covered rocks, intersected by dry ravines, he states the greatest altitude of the desert between Suez and Cairo to be 700 feet above the sea; while the flat marshy district between Suez and Pelusium is twenty-four feet below the sea level. The oasis he considers merely valleys in the sand accumulations, supplied with moisture from the surrounding sands, and held up by a subsoil of impervious clay. The natural drainage of the country is remarkably simple; the greater portion of the little rain which falls in central and upper Egypt is absorbed by the sands, and collected in the oases; the remainder is carried off by evaporation, or conducted to the sea by cracks in the strata. The amount of water which in its course, or about one-half its entire length, receives not a single tributary stream.—The author then describes the various formations, consisting of—1. Hypogene rocks, with argillaceous schist; 2. Breccia di verde; 3. Lower sandstone; 4. Marine limestone; 5. Upper sandstone; 6. Post-pelosian deposits; 7. Drifts; 8. Volcanic rocks; 9. Alluvial accumulations; and 10. Sand-drifts.

1. Hypogene rocks compose a small portion of Egypt; they rest on granite and form a zone thirty miles in breadth, between the Red Sea and the Nile; dykes, or masses, of basalt, greenstone, porphyry, and serpentine, abounding; and the micaceous schists produce emeralds, avanturine, hematite, and specular iron. 2. The argillaceous slate is overlaid by the celebrated breccia di verde, composed principally of angular and rounded fragments of greenstone, porphyry, argillaceous and bluish slates, serpentines, and marble, with a light green compact friability, cemented by a slightly calcareous paste of various shades of green and reddish purple; no fossils are found in this formation. 3. Lower sandstone—varies from a loose silicious aggregate, with a friable calcareous or ferruginous cement, to a compact quartz rock; it is often associated with thin beds of green and purple clay, and amethystine quartz traverses it; this stone was much used by the ancients in their sculpture. 4. Marine limestone.—The sandstone is overlaid conformably by a marine limestone, which covers the greater part of Egypt; the upper beds abounding with ammonites; the lower beds yield crystallized gypsum, chlorite of soda, aragonite, alabaster, sulphate of barites, and crystallized sulphur, and nodules of carbonized vegetable matter. 5. Upper sandstone.—This formation occurs in horizontally stratified patches, resting on the marine limestone, and has been traced from the Mediterranean across the desert, even into Abyssinia; such numbers of trunks and fragments of silicated trees are found, that a part of the Suez desert, seven miles from Cairo, is called the petrified forest; it consists of a sterile irregular plateau, considerably above the level of the Nile, extending south three and a half miles, and four miles eastward; many are scattered over the surface, among rolled and angular fragments of dark grit and pebbles of jasper, chert, quartz, and sharp-edged fragments of effaced wood; the majority of the largest trees lie towards the north-west; two of the largest, measured by Mr. Newbold, were forty-eight and sixty-one feet in length, and two and a half and three feet in diameter; among the fractional trunks many pieces were found with the edges sharp and fitting closely, though several feet asunder; a few specimens are found embedded in the sand, and still fewer in a vertical position, rising from twelve to twenty inches above the surface; Mr. Newbold cleared away the sand from one of these, and found it fixed in the subjacent conglomerate, but destitute of roots. From the appearances of this fossil forest and the adjacent district and valleys, he is of opinion that this part of Egypt has twice formed the bed of the ocean, and twice been elevated above the surface of the water; that the fossil trees lived between these periods, when they were drifted into the ocean, and covered up by a bed of loose sand, and afterwards raised to their present position. From the little worn aspect of the trunks, and the nice adaptation of the fractured parts, it is conjectured that they were silified at least at no great distance from the spot; but, as no signs of roots can be traced, Mr. Newbold hesitates to agree in the hypothesis that this is the site of a submerged forest. 6. Post-pelosian deposits are a range of strata on the shores of the Red Sea, composed of calcareous deposits, containing trilobites, radiolaria, and corals. 7. Drift.—The saline sand and gravel of the deserts, derived in great parts from the fossil wood sandstone formation, and the gravel beds, which cover the raised coral beach of the Red Sea. 8. Volcanic rocks.—The trap and porphyry dykes of upper Egypt, penetrating all the rocks, from the lower sandstone to the granite. 9. Alluvial accumulations.—The mud of the Nile and its delta; the float of this mud is generally dark brown, highly calcareous, retentive of moisture, effervescent, and fizzes, per se, into greenish glass; the annual deposit varies in thickness from as much as a few inches, and each layer may be separated from the rest; in upper Egypt the white thickness of this deposit is forty feet, in middle Egypt thirty feet, and at the apex of the delta eighteen feet. 10. Sand-drifts.—Mr. Newbold closes his description with a notice of the dunes or hills of sand which strew the shores of the Red Sea and the Mediterranean, chiefly derived from the drifting of sand-banks, thrown up by the river.

GEOLOGY OF THE NEIGHBOURHOOD OF BAYONNE.

In a paper, read by Mr. Pratt, F.G.S., at the Geological Society, an account was given of a remarkable deposit in the neighbourhood of Bayonne, referred by French geologists to the upper part of the cretaceous system. It is many hundred feet in thickness, more or less highly inclined, and resting, as far as the disturbed state of the district will admit of a determination, nearly conformably upon well characterized cretaceous strata. The whole, apparently, been elevated by the same causes which have disturbed the cretaceous beds in the neighbourhood. It contains numerous fossils, the greater part of which are testaceous, a few referable to cretaceous forms, and several new or indefinite. The mineralogical character of this deposit differs greatly from any known tertiary or cretaceous system, appearing more nearly the plastic clay; and, in its upper part, apparently covered by it. On the other hand, the existence of some cretaceous species among its fossils, the doubtful character of others, and the nearly conformable position and high position of its strata, overlying the chalk sand, seem to connect it with the cretaceous system. Mr. Pratt describes, in detail, the sections of this deposit, seen on the sea coast, in the neighbourhood of Biarritz, where the cliffs vary from twenty to eighty feet in height. The strata are much disturbed, and there are several faults. In places, the intrusion of igneous rocks has converted an impure limestone into a hard crystalline marble, or dolomite. The organic remains differ in different localities, but Mr. Pratt found certain species common to all the beds. The fossils therein found differ altogether, however, from those which occur in the cretaceous beds by which they are surrounded. The latter have much the appearance of chalk marl, and form shells varying from fifty to 100 feet in height. Mr. Pratt gives lists of the fossils found by him in this interesting deposit. Several of them, referred by French naturalists to cretaceous species, he found, on comparison, to be distinct. He remarks that, though there is a gradual change of species in the organic remains, from the first rise of the strata to their termination, certain shells and shells continue throughout, and the change is not greater than might be expected, considering the variety in the mineralogical character of the beds. He concludes by observing, that this extensive deposit, the characters of which are, on the whole, tertiary, and which, probably, may be placed earlier in the series than any described marine beds (unless we except the Diaboli and some other deposits allied to them in position and fossil characters), has been elevated at a period posterior to the chalk.

IRONMOUNTAIN DISCOVERY.—A circumstance of much interest has just occurred in the neighbourhood of Gwinnett’s Ferry, in connection with the sand-banks which form on meteorological occasions a frontier on its shores. Flint and Gwinnett Towns are nearly five miles long and about half a mile wide, and form a continuous sand-bank, some of which are forty feet high. Tradition says that they are raised from the sea-shore, the sand being blown inland by successive gales, and accumulating for thousands of years. There is no doubt that much valuable land has been lost underneath them. About 1800 years ago, Upton Ferry lay just at the edge of some of the Gwinnett sand-banks as they then stood, when the sand overwhelmed, first on one side, then on another, till the whole estate was destroyed, and nothing remained but the farm-house. At last, a heavy gale carried away some of the sand upon the house, and buried that also, the inmates having been just able to escape with their lives. The buried place has since passed, and where Flint and Gwinnett towns were established, nothing has been visible but large banks of sand-banks, which, from the name of the estate they cover, are known by the name of Upton Towns. From the great value of the sand as material, for it contains about 20 per cent. of carbonaceous shale, thousands of tons are carried away yearly. Last week, as some persons were filling their carts, they discovered the chimney of Upton Farm-house. The land, of course, is unoccupied, but it is very probable that many of the houses will be left open, as the主人 of such a discovery was induce the carriers to work upon this spot—Cornwall County.

PORT MARY-MASSON STORES, LIVERPOOL.—We perceive, from our shipping list, that the arrangements for the transmission of raw materials material from Port Mary-Masson, are now placed on a permanent footing, and that large quantities are arriving thence by every vessel. Regarding the movements of these stores, we are informed that they are to be sent to Liverpool by rail, and thence to the docks, and thence to the port of Liverpool by steamship.

THE MINING JOURNAL,

VALUABLE & EXTENSIVE IRON FOUNDRY, FORGE, AND GENERAL FITTING ESTABLISHMENT.—TO BE SOLD. BY PRIVATE CONTRACT, all that extensive RANGE OF BUILDINGS, belonging to Messrs. Weston, and Walsh, known as the PORTRACE-LANE IRON WORKS, near Stockton-on-Tees, comprising a large and spacious FOUNDRY, with its requisite STOVES, PITS, and CRANES, FORGE SHADE, BLACKSMITH'S, MACHINE, and FITTING-UP SHOPS, together with every other CONVENIENCE for carrying on an extensive business. Also a very commodious DWELLING-HOUSE, hitherto occupied by one of the partners, and immediately overlooking the works, with a five-stall stable, horse-stable, gig-house, and granary. The site of the above works is peculiarly desirable, as they lie contiguous to the CARRON RAILWAY, thereby having access to all the canals and other railways of the district, as well as being only about a quarter of a mile from their place of shipment, where there is a wharf and crane for every purpose of import and export. The engines, forge hammers, and other fixed machinery, may be taken at a valuation, and a part of the purchase-money remain on security of the premises.

Further particulars may be known on application to the owners, or to Messrs. Wilson and Faber, solicitors, Stockton.

Portracte-Lane Iron Works, Stockton, April 12.

TWO CAPITALISTS.—OPPORTUNITY OF MOST ADVANTAGEOUS INVESTMENT.—The ADVERTISER is desirous of POINTING OUT, to possessors of capital and enterprise, a most EXCELLENT SITUATION, in the county of Durham, where there is a MANOR, divided into four townships, exceeding over 9000 acres, and bounded by a navigable river, all belonging to an ecclesiastical corporate body (excepting 200 or 300 acres of private freehold), and in which there is already established an excellent port, where coal are daily shipped, and through more than two railway lines—the one to the port just-named, and the other to one of the five harbours in the kingdom, with every facility for shipping coal, distant only seven or eight miles—thus making the transit dues a mere bagatelle, compared with many countries have to pay at present—viz., from twenty to thirty miles of railway. Three or four collieries have been recently sunk, where COAL of first-rate quality is working, and others are in progress, each in circular approximation of from seven to ten miles of the manor, and bringings have been commenced in the adjoining parts, not three miles off. In short, the advertiser is convinced, that such a SPLENDID OPPORTUNITY for INVESTMENT OF CAPITAL, only requires to be MADE KNOWN to the MINING CAPITALIST to ensure his serious attention.—Any such who may be desirous of the required information may obtain it on addressing letters to "A. B. L.", Post office, Dartington, Durham.

ON SALE, VALUABLE COPPER MINES, situated in the British West Indies.—The PROPERTY consists of nearly ONE THOUSAND ACRES OF LAND, about a 8th of which freehold, and the remainder held under advantageous leases. Numerous mines have been discovered on the property, but only one worked, on which a shaft to the depth of forty-five fathoms has been sunk, and several short levels driven, from which upwards of 200 tons of ore have been raised, yielding, on an average, more than 20 per cent. of copper. The mine is the lowest level (thirty fathoms from adit) is very large and productive, and worth about \$50 per fathom, with every prospect of improvement in depth.

There are on the property convenient houses for agents, miners, and labourers, and all other necessary buildings, together with a steam-engine, pump, pump, coal, iron, timber, and other materials requisite for carrying on the works for some time.—The mines are situated near the sea, and the expenses of shipping the ore and land carriage do not exceed \$1 per ton. The whole of the property will be sold, or, if more agreeable to purchasers, the present proprietors will retain some interest in it.

Further information may be obtained upon application to G. W. Cotton, Esq., Richard's-court, Lime-street, London.

A TEN MINING ASSOCIATION.—Notice is hereby given, that a GENERAL MEETING of the shareholders will be held at the London Tavern, Holborn-gate-street, on Thursday, the 14th day of May next, at Twelve o'clock noon, precisely, for the purpose of receiving the report of the directors as to the affairs of the association during the past year, and also a statement of the financial accounts for the same period. The amounts will be at the office for the inspection of the shareholders one week previous to the meeting.—Dated this 2d day of April, 1843.

By order of the board.

EDWARD J. COLE.

BLAENAVON IRON AND COAL COMPANY.—The directors of the Blaenavon Iron and Coal Company hereby give notice, that the EXTRAORDINARY MEETING of the shareholders, for the purpose of confirming a resolution passed at the Annual General Meeting of the 20th ult., will be held at their offices on Friday, the 19th inst., at Two o'clock precisely.

By order of the board,

RICHARD JOHNSON, Secretary.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturer have been furnished from every part of the kingdom, they enclose the following letter, recently received from John Taylor, Esq., F.R.S., &c., &c.

"I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough conviction of the great usefulness of the Safety Fuse, and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Chichester, Cornwall.

SEYSEL ASPHALTE COMPANY (CLARIDGE'S PATENT).

Established March, 1840.—The extensive patronage which this valuable MINERAL production continues to receive from the most eminent ARCHITECTS and ENGINEERS in this country and abroad, distinguishes it from the numerous artificial compositions which its reputation gave rise to, but which having been found very inferior to the original material, most of them have ceased to be used. Its merits being well known, it is only necessary to refer to a few of the public works already executed and now in progress. On the London and Greenwich Railway, and joint station, London Bridge, 400,000 superficial feet, several thousand feet at the Great Western, Birmingham, Midland Counties, South Western, Brighton, Blackwall, and other railways, covering of arches at the South Metropolitan, Highgate, and Numbered Companies, the covering of the embankments at the French Rock Battery, Liverpool; the pavements in Whitechapel, the carriage-drives at the Horse Guards, and at the entrance to the park by Admiralty House; the cells and other apartments of the new prison at Holloway; several works at the stations on the Dublin and Kingstown Railway, and many other public and private works in different parts of England, Ireland, and Scotland.—A scale of prices, with books of testimonials, one of all times he had at the company's disposal, whose specimens of its various applications may be seen.

J. FARRELL, Secretary.

"This is unquestionably a most valuable invention."—Editorial Notices.

"We desire to make as widely known as possible one of the most valuable inventions of the present day; we enclose to the paper enclosed by Mr. Smith, &c., &c.—Court Journal.

"A large quantity, however, on the use of this improved paper made in Furniture, the interior decorations of buildings, &c., has been placed in our hands, and, especially, until we had pursued the process, and glazed over its pictorial contents, we had no conception of the number of pictures for which paper was suitable. Every picture consisting of illustrations for collages, cutouts, pasting, mountings, &c., &c., from the richness and beauty of the material, and especially of high relief, are soon made twice the value of any composition."—Observer.

"Mr. Blomfield has shown, not only the use of paper made, but its beauty, so clearly, as to make his volume a real temptation to persons of more taste than sense."—Illustration.

"In lightness, cheapness of cost, and readily taking of colours, rendered it, at all events, of incalculable value as a substitute for paper and wood carving, &c., &c., on a vast improvement in art."—Pictorial Journal.

Paper-Making Works, 11, Wellington-street, North, Strand.

OFFICE FOR PATENTS OF INVENTIONS AND REGISTRATION.

TRADE OF DRAWING, 16, LIVERPOOL-UNION BUILDING.—Invention and Registration are informed, that all business relating to the recording and registering of PATENT and TRADEMARK PATENTS, Specifications, and Drawings, of Inventions, is expeditiously and successfully effected. After Registration under the new Constitutional Copyright of Liverpool Act, 1st and 2nd Vict., cap. 10.—A principal feature consisting of instant registration, may be witnessed, and references to an alphabetical list of patents and registered trade-marks, are afforded by the Patent Office.

Mr. ALEXANDER PRINCE, 11, Liverpool-Union-build.

COMPOSITIONS FOR WRITING WITH STEEL PENS.—STURGEON'S WRITING PENS.—These compositions, which have now considerably extended the use of the STEEL PEN, are brought to very great perfection, being more equal to gold, silver, &c., and every request granted to the ordinary use. In these instances they have been equalled.

Read unknown off.

An improvement which has been made, a thin fluid, changing into an instant black ink.

A patent carburetted blue fluid, containing a strong blue colour.

An instant blue ink of the strongest character, but more fluid.

A instant red ink, the strongest writing.

A composition which has been made, and substance adapted for preserving ink from evaporation and decay.

Some of the new composition for writing pens, are prepared, which will enable those who wish to the utility of these writing, to do so at a small expense.

Persons desiring to the blue fluid, should be pleased to see me at the office."—C. Sturgeon, Blue Fluid, or "Steel Pens," Whitchurch-road, North.

"Black ink, and composition of the above articles, are constantly being advanced to new dimensions, but, no composition, they will be found to have only these new uses.

Prepared by HENRY STURGEON, 16, Woodstock-street, Blackfriars-road, London, and sent to manufacturers and booksellers.

The carburetted blue fluid, are great articles, the pen is safe, the pen, the pen against scratches, which are gallantness, in color, and which is longer.

STURGEON'S SELECT STEEL PENS.

The steel pens have been tested before the manufacturers of these articles, so as to prove the highest fluid, that can be conveniently communicated, both in quantity and strength.

PARTNER WANTED.—WANTED, by a GENTLEMAN of acknowledged mechanical talent and long experience as a mechanist and practical engineer—who has been, for many years past, a partner in, and director of the mechanical department of one of the most extensive and celebrated engineering and machine making establishments in Great Britain (in which a dissolution of partnership is now taking place), and who has a considerable capital of his own—a PARTNER, who can command £40,000. The advertiser would undertake the sole management of the mechanical department, and would prefer a partner who would take charge of the books, and superintend the general business of the concern.—All applications to be made in writing, under cover, to Messrs. Hale and Worthington, solicitors, Fountain-street, Manchester.

ANNUAL TRANSIT.—THE ADVERTISER having, for several years, considered that mechanical flight is quite practicable, contrived, in his own mind, a PLAN, which, although, cannot be carried out, but not having sufficient funds for the purpose, is WILLING TO DISCLOSE HIS IDEAS, and GIVE UP HALF THE VALUE of the discovery and its profits to any person who may feel disposed to ADVANCE the SUMS necessary for fitting out a PLANE, and TRYING THE EXPERIMENT.—Address to "H. H.," care of Mr. R. G. Greenhill, 1, Portland-street, Manchester.

H. H.—As the advertiser has only formed the plan of the machine, and not the moving power, he would prefer treating with a practical mechanist.

SMOKE NUISANCE.—ECONOMY OF FUEL WITHOUT THE NUISANCE FROM SMOKE.—By G. W. WILLIAMS' ARGAND FURNACE.—The principle of this furnace consists in the mode by which the air is introduced in the gaseous matter evolved from coal, whereby a more perfect combustion of the constituents is effected, the process being conducted on true chemical principles as explained by Mr. Williams, in his *Treatise on the Combustion of Coal*. A furnace constructed on this principle may, by permission, be daily seen in action at the Water-works, Soho street, and Manchester Railway Station, Edge-hill, Liverpool. For further information, apply to Brooks and Co., agents, 5, Town-hall-buildings Cross-street, Manchester.

ENCAUSTIC or INLAID TILES, for PAVING CHURCHES, HALLS, CORRIDORS, &c., &c.—CHAMBERLAIN and CO., of the ROYAL PORCELAIN WORKS, Worcester, beg to inform the public, that, in consequence of the increased demand for these beautiful tiles, they have made EXTENDED ARRANGEMENTS for MANUFACTURING THE SAME, and are PREPARED to EXECUTE PAVEMENTS, either from ancient examples or modern designs, ON CONTRACT, or otherwise, in any part of the United Kingdom. These tiles being fired to a very high pitch, and glazed in uniformity with the best ancient specimens from Merton, Gloucester, the Chapter-house, Westminster, and other places, are perfectly impervious to wet or damp, extremely durable, fire from dust, and easily cleaned. Chamberlain and Co. take this opportunity of announcing that they have greatly enlarged the stock of their London houses, 1, Coventry-street (late Flight, Barr, and Barr), and 155, New Bond-street.

IMPORTANT TO INVENTORS AND PATENTEEs.—Mr. J. R. HILL, having been engaged as a CIVIL and PRACTICAL ENGINEER, during the last twenty years, in making designs and carrying out highly important works, machinery, &c., for some of the most eminent engineers of the day, has COMBINED therewith the PRACTICE OF PATENT AGENT, in obtaining patents, entering caveat, making drawings and specifications, and transacting every department of patent business.—J. R. Hill begs to suggest to inventors and others the great advantage arising from confidentially CONSULTING and EMPLOYING ONE whose knowledge has been acquired from PRACTICAL EXPERIENCE IN THE USEFUL ARTS, instead of consulting the scientific part of their business to those who, from want of mechanical knowledge, have, in many cases, obtained patents which have subsequently proved void in law, from imperfect description, nonentity, or want of originality—thus involving a serious loss to the proprietors.—Books and records of all patents investigated, and every kind of information furnished.—Designs and drawings, surveys, reports, estimates, arbitrations, and valuations of all descriptions of works, executed with ability and dispatch.

ARGUS LIFE ASSURANCE COMPANY.—59, THROGMORTON-STREET, BANK. Empowered by special Act of Parliament, 5 & 6 William IV., cap. 78.

THOMAS FARNCOMB, Esq., Alderman, Chairman.

WILLIAM LEAF, Esq., Deputy-Chairman.

William Banbury, Esq.
Edward Bates, Esq.
Thomas Cheshire, Esq.
James Cott, Esq.
Robert Inglis, Esq.
Lewis Pocock, Esq.

Physician—Dr. Jeaffreys, 2, Finsbury-square.

Burgess—W. Conson, Esq., 2, Frederick's-place, Old Jewry.

Consulting Actuary—Professor Hall, of King's College.

LOW RATES OF PREMIUMS.

In addition to the subscribed capital of £200,000, the assured have the security of the company's income of nearly £40,000 per annum, yearly increasing, and an accumulating assurance fund, invested in Government and other available securities, of considerably larger amount than the estimated liabilities of the company.

The rates of premium are reduced to the lowest scale compatible with the safety and the stability of the company, thereby in effect giving to every policy holder an immediate and certain bonus without risk, in lieu of the deferred and frequently defective prospectus of a pernicious period.

ANNUAL PREMIUM TO ASSURE £100.

Age.	For One Year.	For Seven Years.	Term of Life.
20	40 17 8	49 19 1	41 11 10
30	1 1 8	1 2 7	9 0 7
40	1 5 0	1 6 3	2 14 10
50	1 14 1	1 19 10	4 0 11
60	3 2 4	3 17 0	6 0 10

One-third of the "whole term" premium may remain unpaid at 3 per cent. comp., i.e., as a debt upon the policy for life, or may be paid off at any time without notice.

In assurances for advances of money as security for debts, or as a provision for a family, when the least present outlay is desirable, the varied and comprehensive facilities of the Argus office will be found to be particularly favourable to the assured. The medical officers attend daily at a quarter before 2 o'clock.

EDWARD BATES, Resident Director.

A liberal commission to collectors and agents.

AUSTRALASIAN COLONIAL AND GENERAL LIFE INSURANCE AND ANNUITY COMPANY.—Capital £1,000,000, in 2000 shares.

Edward Barwick, Esq., F.R.S.
Henry Buckle, Esq.
John Henry Capper, Esq.
George Colquhoun, Jun., Esq.

BANKERS—Union Bank of London.

PHYSICIAN—P. France, Esq., 10, Montagu-street, Russell-square.

ASSURANCE—Hawes, Swan, Stevenson, and Co.,

Securite—Edward Sykes, Esq.

The advantages offered to INSURERS to the Australian colonies by this company are—First, that no extra premium is charged for residence in any of the Australian colonies, except in New Zealand. Second, that no extra premium is charged to those who reside for the whole term of life, for one voyage out to the Australian colonies, and for one return voyage; and that premiums may be paid and claims settled in these colonies. And to all persons who wish to secure their lives, this company offers unusually favourable rates of premium, participation in profits, and the guarantee of an ample subscribed capital.

Participations and full participations may be obtained at the offices of the company, 10, Montagu-street.

Assurances may be effected with or without profit—on an increasing or decreasing scale, or for short periods.

Assurances made in respect of real or undivided personal property, for terms not exceeding three years, or payable by instalments.

Assurance to be particularly requested to the detailed particulars of the company, which may be obtained at the office, 10, King William-street, City, or by letter, addressed to the secretary.

WILLIAM RATRAY, Attorney & Secretary.

BIRMINGHAM CANAL NAVIGATION.—The Bentley Canal, which has lately been re-opened by this company, under the direction of their engineers (Messrs. Walker and Burgess), was opened for traffic on the 1st ult. It connects the normal level of the Weston and Kingswood Canal, near Wednesbury, with the Walsall, or lower level of the Birmingham Canal, near Darlaston, and both districts situate the Walsall level to Wednesbury, and open up the route along the Walsall and Bentley. Although the waterway was vulnerable, a considerable stretch of the canal and principal offices of the company were present; H. Scott, Esq., M.P., acting as chairman pro tempore. In proceeding along the line in the company's possession, the committee complimented Mr. Walker on the excellence of the work done to the navigation, and expressed much admiration of the qualities, and, at the same time, the difficulties with which the head rises in the locks. The total distance between the two canals, nearly three and a half miles, and the locks (20, 21, & 22), was performed by two horses in fifty-seven minutes, the horses employed in passing through each lock having only been forty seconds.

The advantage of speed and convenience mentioned, in working these locks, has been attained by making large paddles with improved devices, and by introducing the water through culverts, extending under the side walls for their entire length, to form a series of long shallow openings into the locks.—Illustrated Chronicle.

THE MINING JOURNAL, Railways and Commercial Gazette.

MEETINGS OF SCIENTIFIC BODIES.

IN THE ENSUING WEEK.

SOCIETY.	PLACE OF MEETING.	DAY
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ORIGINAL CORRESPONDENCE.

THE NEW FURNACES AT THE TRIMISARAN IRON-WORKS.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Observing in your Journal, last week, an account of proceedings at the Trimisaran Iron-Works, I beg to state that, on Saturday, the 22nd ult., the first furnace was blown in, under the superintendence of Mr. Crane, of the Ynyscedwyn Works, whose patent is in operation at Trimisaran; at the same time the first stone of a second furnace was laid.

Since the first three days, the furnace has been making an other iron than Nos. 1 and 2, and is now making entirely No. 1, of the very best quality—which is, I believe, a thing not often done in so short a time. The make has been between forty and fifty tons per week during the time the furnace has been in blast; but is confidently expected to increase, in a short time, to sixty tons per week—quality, however, and not quantity, has been the first object. No other materials have been used than the Welsh ironstones, and the anorthite, or stone-sail—the value of which, when used with the hot-blister, will, I think, receive an additional proof from the hitherto successful working of the Trimisaran furnace.

Trimisaran, May 3.

THE MANAGER.

[We are obliged to our correspondent for the confirmation thus afforded to the remarks which appeared in our last week's Journal, of which, however, from the source whence the information was derived, we felt satisfied as to the correctness.]

THE IMPORTANCE OF A "NORTH DEEP ADIT."

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I have just read an article in the *West Briton* of this week, under the head of "Mining Notices," which is of great interest. It gives a few details of the "south deep adit," by which the mines in Gwennap have been chiefly drained. It states that this undertaking was commenced about ninety years ago—that at Cardrew Mine it is five and a half miles from its mouth—that it unwaters all the great mines in the Gwennap district—that its length, with the ramifications, is thirty-five miles—that its average depth below the surface is about forty fathoms, but at Wheal Hope, on the north, it is seventy fathoms—that the quantity of water drawn by the engines in the district where it traverses is calculated at 900 cubic feet per minute, whilst the adit discharges 1480 cubic feet, or 9000 gallons per minute—that the additional steam power to raise to the surface the whole of this water would require an annual consumption of coal of about 24,000 tons, or about 19,000£ a year. It is to this adit that Gwennap is mainly indebted for that conspicuous station it holds in the mining districts of Cornwall, and without which, it is probable, many of the productive mines in that locality would have ceased to be worked. The adit discharges itself on the south near Carren, a few feet above high water mark. There is also a "north deep adit," which was opened in 1808 at Hayle, about fifteen feet above high water, for the purpose of taking off the grass water from Melliowthorn Mine. It has been driven 500 fathoms south, and is 250 fathoms distant from Great Herland, where, if continued, it would be ten fathoms deeper than the adit of that mine. It is an object, when deep adits are to be driven, that they should be carried through valleys; Hayle Valley extends about four or five miles to Wheal Cleawance. If this adit should be extended to Tappard Bridge or Wheal Providence it would be twenty-five fathoms deep, and, in its course, would intersect the lodes of Herland, Hellician, Wheal Carpenter, &c. If extended further to the south east it would cross the lodes of Drowles, Wheal Hope, &c., and it would cut the lodes of the formerly important mine of Wheal Cleawance forty fathoms deep. The present adit has been driven at an expense of about £1 per fathom, it being through lodes, and it might be kept in repair, at the great south adit is, by the lords contributing in proportion to the dues which they receive. My object in addressing you is to engage the attention of the mining interest to promote the extension of "the north deep adit," that advantages may be derived from it, similar to those which resulted from "the south deep adit."

Penzance, April 29.

R. EDMUND.

(The article referred to is published in another column. The subject is one of the greatest importance, and we shall be happy to devote space for the communications of those of our correspondents, who, feeling an interest in furthering the progress of mining industry, may forward their opinions on the merits of this question.)

THE GATES OF THE MINE.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I know not what to make of your correspondent, Mr. Deakin. The organ of "combative ness" must, at any rate, be developed to a non-nomadic excess. He attacks Mr. Ick on a geological subject, on which he knows about as much as the man in the moon—them, with equal ignorance, presume to tell us that all safety-lamps are modifications of the invention of Davy, and, when his ignorance on these questions is exposed, he presumes to accuse me, if I understand him singularly confused and involved better, of confounding—"credat iudicis apella?"—the "fire damp" and the "choke damp" of the miner together. Does the man mean to say, that I do not know that hydro-carbonate, "proto-carburetted hydrogen," "light carburetted hydrogen," or the "fire damp" of the miner, is inflammable, and, from its low specific gravity, must necessarily ascend? Why, Sir, that is the very principle on which my safety-lamp is founded—the first safety-lamp, too, ever proposed (June, 1815). Does Deakin mean to say that I do not know that carbonic acid gas (the "dead air" and "acid acid" of its discoverer)—the "black damp," "choke damp," and "after damp" (so called, because it is the product of the explosion of "fire damp," and fills the vacuum occasioned by it)—is inflammable, and of great specific gravity (1.336)—so great, indeed, as to be poured like water through a funnel, or caused to flow through an orifice, laid out, or pumped out, all which experiments I have often repeated? Does he mean to charge me with indifference to ventilation, which I have as often inculcated, and urged in my various works, as of paramount importance? If these indifferences are to be drawn, even by implication, I must needs say, Sir, that I am astonished at his impudence, and I am free to confess, that I know not which surprise we meet, his impudence or his ignorance. Floundering in a cloud of his own creation, he is singularly perplexed and obscure. If he feels himself uneasy on his bed of thorns, the man has made it for himself—I shall not henceforth distract his repose. Is it too much to bid him to endeavour to understand the subject on which he so recklessly raves? I fear, however, he is as callous to reason and castigation as the scorpion is insatiable to the painings of the stung. The downward imagines that he remains unnoticed, while the objects around him roll and stagger, and the insatiate believes that he is the only wise man in the world. It is time, however—"fides tua adies"—to your cogitate correspondent, whom I shall name no more. To fall by the hands of an Achilles, or a Hector, has something of glory to boast of, but I must hereafter decline the uncouth distinction of sporting a lance with such an individual as Deakin.

J. MURRAY.

ON THE VENTILATION OF MINES.

TO THE EDITOR OF THE MINING JOURNAL.

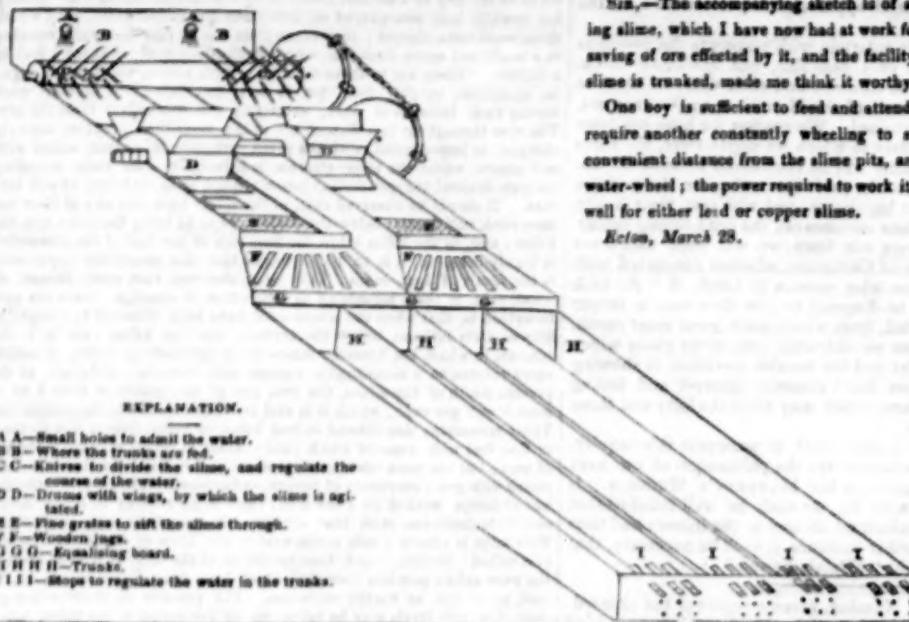
Sir,—Your correspondent, "M. P. V." in the last week's Journal, referring to the ventilation of mines, tells us that, notwithstanding the various opinions of your practical correspondent, Mr. Deakin, the science is still waiting to be explained the ventilation of coal mines. Now, if one of Mr. Deakin's statements be correct, that this country produces the most efficient coal with cinders in the universe, assisted by what is termed a liberal education—and I believe it to be so, as most of them are educated by their employers for their practical and local knowledge of the mines in which they are employed, independent of which the workmen would be a mere novice—then, when we have done to gain or acquire his knowledge?—Why, the practical miner learns his lesson from daily experience and observation—by penetrating into the bowels of the earth; he there finds that the most prevalent feature is Coalition is iron, limestone, Nature, produced by fluid lava-melts, and rocks, and earth, and all the mineral kingdom, following one and the same law, never varying from the laws engrafted thereon, such as those deposited in the alloted place, to fit the whole in同情. And what does this teach him?—Why, that is the criterion of all his plans and designs, in all his operations, that should be his motto—never to alter or change in any part of his plan for what is generally sought after, profit, and then the practical miner, with a clear head and sound experience, may hope to make the engineer's boasted wishes, and, in the ventilation of mines, do better without than without than with.

A. BUNYAN WADDELL CHALLAN.

Birmingham, May 1.

IMPROVED MACHINE FOR TRUNKING SLIME.

TO THE EDITOR OF THE MINING JOURNAL.



EXPLANATION.

- A—Small holes to admit the water.
- B B—Where the trunks are fed.
- C—Knife to divide the slime, and regulate the course of the water.
- D—Drum with wings, by which the slime is agitated.
- E—Fine grates to sift the slime through.
- F F—Worm jags.
- G G—Equalising board.
- H H H—Trunks.
- I I I I—Stops to regulate the water in the trunks.

THE DAVY LAMP.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Increased illuminating effect, and, what is more, increased safety, would be assured, in the case of the "Davy lamp," by the application of the principle of the "solar lamp" to the wick flame within the cylinder. The glowworm light which the lamp yields is bitterly complained of by the miner. Its brilliancy would thus be wonderfully enhanced, and the evolution of smoke, so annoying under ordinary circumstances, be reduced to a minimum. The vertical condition of the flame, moreover, would not be disturbed by "blowers," or currents and counter currents of air, as the surrounding cylinder of glass would operate as a screen.

April 29.

J. MURRAY.

NEWPORT AND NANTYGLO RAILWAY.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Feeling much interest in the carrying out this projected line, so much needed by the increased commercial transactions of the counties of Monmouth and Glamorgan, and knowing the efforts you have made to impress its importance on the minds of all parties, I send you the following abstract of a letter, by J. Brown, Esq., of the Cwm Colyn and Blaina Iron-Works, which I doubt not you will readily insert in your influential Journal.—The canal company being at their wit's end, and, in a circular distributed by them, a few weeks since, having attributed *misuses* and *unscrupulous abuse* upon the statements and calculations of the projectors of the railway, Mr. Brown, in reply, says that the statements, as well as those which follow, are founded on the rock of *truth*, and the *silent contempt* which the company expresses, is solely owing to their inability to refute the arguments of their opponents. It would appear that they are upon the eve of taking a farewell of their 10 per cent. dividends, and capitalisation of property, and the time has at length arrived, when the owners of the mineral wealth of the county will no longer submit to be plundered of their property through extravagant rates of tonnage, and badly constructed roads; for a phalanx equally respectable, numerous, and wealthy, as themselves, in less than twelve months will be arrayed against them, who, with stout hearts and a good cause, will make short work of their overgrown monopoly. In comparing the *bœm*, as a trifling reduction in tonnage is called, with other modes of transit, the following is the result:—The charges on the Monmouthshire Canal are 20 per cent, higher than by the Llanelly Railway, and the Swansea and Neath Canals 30 per cent, higher than by the Glamorganshire Canal and the Taff Vale Railway, and 100 per cent, than in the North of England on canal only, while on iron, in no one case, is it less than cent. per cent. After a variety of calculations, made from returns of various railways, showing the vast superiority of such conveyance, both as regards time and expense, the writer arrives at the conclusion, that, taking into consideration every expense of maintenance of road, new rails, repairs of bridges, &c., &c., there is an advantage in favour of railways of 0.268 pence per mile, even supposing the canal company made no charge for tonnage, while, instead of a *good road*, the pass as regulated by the canal company, on the railway an average speed will be maintained of about eight miles per hour. The canal company flatter themselves, that, by the paltry reduction of one halfpenny per ton on the carriage of iron, they will cause some portion of the traffic which has deserted them for other channels to return; but in this they will find themselves mistaken. The produce of the extensive works of Beaumont, Ebene Vale, Blaenavon, and Nantyglo, the carriage of which they might have retained but for their liberal conduct and exorbitant charges, will still be conveyed by the same routes as at present, to the disgrace of the canal company, until the Newport and Nantyglo Railway shall be completed, and insure that rapidity of transit, and economy of expense, so essential, at the present day, to the prosperity of the coal and iron trade.

Monmouth, May 1.

Mr. Deakin's article is well worth reading, and, while it surely ought not to be charged against the practical miner, as a crime, his not being better educated, if he has had no opportunity of becoming so; and far less ought he to be blamed for being more efficient, as a director of mines, than men of superior education, who are destitute of practical knowledge. I shall conclude this letter with an account of the difficulties sometimes encountered by working miners to get possession of literary information, and the great exertion made by some to obtain it. The most of the particulars which I shall give partly came under my own observation; the rest I had from the individual to whom I allude. About a quarter of a century ago, a young man, anxious to improve himself, by chance heard that an encyclopædia then published contained an able article on mining, but how to "get a read" appeared, at first, as difficult to him as to get to become "Master of the Mint." At length he thought of making bold to apply to his parish minister, to assist him to get a loan of it from a college library, although his only acquaintance with his reverend was, that he had often "spoken at him in church, but had never spoken to him but once, and that was, when he was presented to him for baptism." Nevertheless, he thought that one who talked so soft and so fine, of the beauty of Christian love, would be glad of an opportunity of giving a practical exhibition of it, by lending a little help in need to a poor parochial, particularly as it was not money he required—so to him accordingly he went. The good clergyman heard his application at his hall door, and, without waiting to hear more, or asking any questions in return, he civilly refused to apply to the library for the book, by making some excuse of its being against rules, &c. Here the young Tyro was blasted, and his courage fell, but, as he said, it was but for a moment. On his way home, he recollects that the landlord of a small farm in the neighbourhood was a lawyer in a learned city, about thirty miles distance, and he thought, if he could procure a letter of introduction from the farmer (which he expected to get the more readily, as he was nearly as poor a man as himself), the gentleman might get him a read of the book, and, with this simple introduction in his pocket, he set out on this long journey on foot, with a light heart and light purse, but with still high hopes of being successful in what, without any metaphor in using the word, might truly be called the pursuit of knowledge. In this instance, fortunately, when he arrived at his journey's end, he found the "country lawyer" proved to be to him "the good Samaritan," brought him into his house, and kindly questioned him as to the progress he had made in his studies in literature and science, and, with many flattering words of encouragement to proceed in the course, which, he was pleased to say, he had hitherto commenced, invited him to call back in the morning at a certain hour, and he would bring him to the lawyer's library, and get the book for him that he desired for two days, but that it could not be taken out of the city. This day was an era never to be forgotten in the life of that young man, when he was put in possession of the book. It was to him a treasure, as he thought, of incalculable value, and when he got to his humble abode, he set briskly to work, copied what he thought most important of the latter parts, made rough sketches of the plates, and had the book returned within the prescribed time; and, after expressing his thanks to his kind benefactor, which was too heartfelt and sincere to find suitable utterance in words, but was, no doubt, perfectly intelligible to the gentleman, he then returned to his humble employment, and, as far from his literary propensities taking off his attention from his necessary labour in the mine, I have been led to say, that, for months after, when thinking of the acquisitions he had made on this occasion, he thought he was able to wield the pick, and strike the pyd, with a more nervous stroke than he had ever done before. It may be interesting to some of your more humble readers, to know that, before this young man had arrived at the age of twenty-two years, several instances of trust and responsibility had stood candidately for his services, and that, without his possessing any rare talent or genius, as called, beyond measure, but with industry and integrity not to be surpassed, for twenty years he discharged the duties of different arduous appointments, with credit to himself and benefit to his employers, at which time he had acquired an honourable rank in society, with a small independence, and, what was better (and which is a pity does not always happen in like cases), the improvement of his mind—properly speaking, of himself—kept pace with that of his outward condition. But the most melancholy portion of this short narrative is yet to be told: this young man did not escape those pulmonary complaints to which miners are so subject, and, after several years' struggling with the disease, he was 30, at the early age of thirty-two years, buried among his friends—dear friends in his brother's arms, leaving his surviving friends the consolation, that, was length of life to be measured by his reduced re-employment, and the honorable and virtuous discharge of all its duties, then, it might truly be said, he whose life they regretted had passed at a good old age, all of which can be recalled by his old friends.

J. MURRAY.
ON THE ADVANTAGES OF SYSTEMATIC EDUCATION IN THE MINING DISTRICTS.

TO THE EDITOR OF THE MINING JOURNAL.

"It is much easier to superinduce the ornaments and aids of a cultivated mind upon business habits, than practical efficiency upon a merely scholastic education."

Sir,—All experience has proved that it is more difficult to make a miner of a scholar, than to make a scholar of a miner; and, had one-tenth of the time writing which appears to have been wasted in recommending the employment of men of mere scholastic education, as directors of mines, been written in advocating a better education for miners in general, and those of them in particular, who were to become guides, or managers of the works, more favourable results would, no doubt, have followed. Your Richmond correspondent, in last week's Journal (who writes with great indignation, as regards the ignorance of those who now superintend the working of mines), would persuade us that he takes a humane and Christian view of the subject. Also for poor frail humanity, and much-abused Christianity, how much villainy has been perpetrated on mankind by men who professed to be guided by thy sacred injunctions? May I beg to ask this writer, does he believe it consonant with the requirements of humanity and Christianity, that the miner should be left "incompetent by ignorant hardihood of disposition for want of education," provided their masters could be induced to employ, as "superintendents of their operations," those whom he and others would call educated men. If this is his belief, I am thankful it is not so that many of the poor and despised miners have "learned Christ," whose philanthropy was displayed by His love and care for the improvement of the individual minds of the multitude of men. But, for the comfort of such Christians as "M. P. V.," I beg to inform them that the masters, or mine proprietors, would require very few arguments to induce them to employ the well-educated men to whom he alludes (a plenty of these could be had for half the wages that must be paid a clever practical miner), were they at all as efficient in the performance of the duties required. But, in the meantime, it surely ought not to be charged against the practical miner, as a crime, his not being better educated, if he has had no opportunity of becoming so; and far less ought he to be blamed for being more efficient, as a director of mines, than men of superior education, who are destitute of practical knowledge. I shall conclude this letter with an account of the difficulties sometimes encountered by working miners to get possession of literary information, and the great exertion made by some to obtain it. The most of the particulars which I shall give partly came under my own observation; the rest I had from the individual to whom I allude. About a quarter of a century ago, a young man, anxious to improve himself, by chance heard that an encyclopædia then published contained an able article on mining, but how to "get a read" appeared, at first, as difficult to him as to get to become "Master of the Mint." 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W. PARKER.

PROCEEDINGS OF PUBLIC COMPANIES.

MEXICAN COMPANY.

The annual general meeting of the shareholders in this company was held at the office, Winchester-street, on Thursday, the 4th inst.,
WILLIAM BURNIE, Esq., in the chair.

Mr. MAUDS (the secretary) read the advertisement convening the meeting, and the following REPORT.

In the report presented to the proprietors at the last annual meeting, the directors alluded, somewhat in detail, to the heavy losses which had been sustained during the preceding year (1841), on the mining operations of the company in the state of Oaxaca, as exhibited in the annual balance-sheets of that undertaking, which was then submitted to the proprietors. These continued heavy losses on the working of the mines appeared so discouraging to the directors, that they were induced to recommend to the proprietors the expediency of abandoning altogether the mines, which were then wrought for account of the company, and of letting their operations for the future to purchases of ore from native miners (haciendas), and the reduction of them by barrel amalgamation. These suggestions having met with the approval of the proprietors, the directors just no time in carrying them into effect; accordingly, by the very first opportunity which presented itself, the directors sent orders to Mr. Fenochio, their agent in Oaxaca, to give the notices required by the contracts for the surrender of the mines to their respective owners, on the expiration of such notices. Prior, however, to serving those notices, Mr. Fenochio caused an official inspection to be made of the mines, by the mining department of the state, who reported that they had been wrought in strict conformity with the ordinances, or mining laws of Mexico; this was done to prevent religious or captious objections—but too frequently resorted to in Mexico, on receiving back the mines, on the part of their owners, especially where, as in the present instance, they were subject to an annual rent. This precaution being completed, Mr. Fenochio proceeded immediately to carry out the instructions of the directors; and, on the expiration of the notices, the mines were surrendered to their respective owners, in the months of September and December last; the Hacienda of San José, also, being no longer required for the service of the company, was likewise returned to its owner, in December. Thus have the intentions of the directors and proprietors been attained, in respect to the abandonment of the mines, without the smallest demur or litigation on the part of their owners, and the company thereby relieved from very heavy responsibilities and charges, for rentals, salaries, &c., to the officers who had charge of the working of the mines, by which a considerable saving will occur to the company. The operations of the company are now, therefore, limited to the purchases of ore from the haciendas, or native miners, on assays previously ascertained, and at prices (dependant on said assays) previously agreed on, limiting the purchases as much as possible to ores suitable for barrel amalgamation—which, however, requires ores of so high a ley, or standard (three to four ounces per quartal, at least), that Mr. Fenochio, in spite of all his efforts, and the great encouragement held out to him, had not lately been able to procure a sufficient supply of barrel ores to keep the new amalgamation mill at Yavachi fully employed, while that at Santa Anna was entirely unemployed during the past year; notwithstanding which, the profit on this branch of the company's operations, for the past year, amounted to £2,000, or £2,000, which—but for the £800, or £700, lost on the mines—would nearly have extinguished the loss on the year's operations, £800, or £700, as appears by the Oaxaca balance-sheet, or now submitted to the meeting. It is evident, however, that unless a greater stimulus can be given to the acquisition of barrel ores, on an at least to keep the mill at Yavachi fully employed, the operations of the company cannot be carried on in a satisfactory manner; with a view, therefore, to the attainment of this desirable object, the directors have lately, on the repeated and urgent representations of their agent (Mr. Fenochio), sanctioned his advancing £2,000 on a contract for the Santa Gertrudis Mine, on what is termed in Mexico "oro de piedra," or corn rock for supplying mines with money and other articles, on condition that the owner shall deliver to the company all the ore which their agents may deem it expedient to purchase, at prices previously agreed on, and upon assays previously ascertained—which pieces, in consideration of the advances made to the owner to enable him to work the mine effectively, are usually regulated on a scale much below what is paid to other native miners, called huancos, for ores furnished by them. By these means, the company, for a comparatively small advance of money, expect to obtain all the advantages which the mine can be made to yield, as far as their operations are concerned, without the risk and responsibility of mining, as owners, except the expenses accrued beforehand to be advanced to enable the owner to work it effectively—for which they have a lien on the mine itself, as their security. To enable the directors to carry out this advance, and to reinstate the trustees' indemnity fund, the £2,000, which was reported at the last yearly meeting as having been sent to Mr. Fenochio, in a letter of credit, which, when availed of, was to be advanced out of the indemnity fund.

The directors now report that, on the 20th of November last, they made a call of 10s. per share on the 500 shares then in existence, which call was paid on 20th January, leaving no unpaid upon—which, in pursuance of the provisions of the deed of constitution of the company, were declared forfeited for the benefit of the remaining proprietors, by resolutions of the directors, recorded in the minute book of the 1st or February inst. The directors now submit a balance sheet of the company's accounts, from its commencement to the 31st of December last, examined and attested by the auditors, as prescribed by the deed of constitution; and have to report that two of the directors—namely, John Mitchell, Esq., the chairman, and John Oliver Hasson, Esq., one of the trustees, and William Wainwray Tertlington, Esq., one of the auditors of the company, are now in turn, by settled rotation, to go out of office; but, being eligible, now offer themselves for re-election to the offices of directors and auditor, respectively.

Balance-sheet of the company.

	TO CAPITAL.
Deposits and calls from commencement to Dec. 31, 1841	£70,000 10 0
Cash received on call of 10s. per share on 500 shares, on Nov. 20, 1842	271 0 0
Balance of profit and loss, dividends, interest, Expenses, &c., in indemnity fund, discounts, &c.	5,138 10 0
Total	£77,309 0 0
By COMMISSIONERS IN MEXICO.	
Amounts transmitted home to Dec. 31, 1841	£20,247 16 0
Ditto ditto	1,245 2 4
General expenses	25,402 17 2
Pictures and furniture	100 0 0
Indemnity fund	1,000 0 0
Cash, Dec. 31, 1842, £1 L 10s. 7d.—Stamp, 10s.	101 4 7
Total	£20,529 0 0
Cx.	

The CHAIRMAN said he was sorry, on meeting the proprietors on this occasion, that they were not in a position to give them more favourable information; after, however, the unfortunate results of the working of all their mines (and from the beginning, up to last year, they had worked between forty and fifty, all of which were to have produced handsome fortunes), and the sinking of an enormous sum of money, it was a consolation to hear they had got rid of all responsibility in the mines, and had reduced their expenses from about £2,000 per annum to £200, and he now hoped, and, indeed, believed, that if they could only obtain from business, and from the Santa Gertrudis mine, over to the amount of 2,000 quintals per month, for their barrel amalgamation, they should reap a small dividend; he should be happy to see 3,000 or 4,000 quintals, which would then leave them a handsome profit, but they must not expect to realize an iota of the sanguine expectations with which they had unfortunately been deluded some years ago. They had made a profit during the year even with their present small purchases (only 1,600 quintals per month) of nearly £1,000 dollars, which had been swallowed up by the loss on the mines of \$200 dollars; they had now, however, got rid of that nucleus, and he hoped the directors, at the next annual meeting, would be enabled to come before them under more favourable auspices.

Mr. CLIFFORD suggested that, as the Santa Gertrudis mine held out such good indications, it would not be wise to withhold a few hundred dollars to obtain sole possession of it; but the CHAIRMAN was sure the proprietors generally would not sanction the entering again on mining responsibility when they could reap a certain benefit by the mode now adopted.

Mr. MAUDS then read several extracts from letters from Mr. Fenochio (the agent), all strongly urging the directors to enable him to make some trial of the Santa Gertrudis, and which had led the directors to adopt the plan as stated in the report.—In answer to a proprietor, he informed the meeting that the available assets now in Mexico amounted to about £6,000 dollars; that the ore from the Santa Gertrudis mine were of a richer description than those of any of the mines they had ever worked—producing, in some instances, 20, 30, and even 40 oz. per quintal, but the average ley during the time they had taken the ore, was 8 oz. per quintal, which would yield a good profit on barrel amalgamation; the lowest ley of ore which could be worked to advantage by this process, was about 4 oz. or 4½ oz. per quintal, and all above that was capable of giving profits; at all these two hancadas, if fully employed, they could amalgamate 4,000 quintals per month.

A few extractsof the report indicated if the directors had taken into consideration, and if any steps were being adopted, for obtaining a license from the Mexican Government to export their bars; the advantages obtained would be great, and, as the Real del Monte Company sold their silver to London, and obtained a larger price than if sold in Mexico, he saw no reason why they should not do the same.—Some conversation ensued on this subject; it was stated that the danger in sending the precious metals through the country, overwhelmed the extra profit, and there was no possibility of getting it recovered; also that the Real del Monte Company's mines were not so far inland, and, consequently, did not run so much risk.—Mr. MAUDS said the subject had been well considered, and could assure the proprietors, notwithstanding the risk, which was not so much as formerly, the advantages would be great—the silver, which in Mexico sold for 7½ dollars, would fetch in England 8 dollars; if the bars were exported, the gold alone would pay well, as in England 5 gns. to the pound were allowed, while in Mexico it was 12 gns. per pound; he had written to the agent, stating that the Real del Monte had obtained the permission to export, and requesting him to inform the directors why they were not in the same position, or what steps could be taken to accomplish it. These

explanations appeared to give satisfaction, and the following resolutions were unanimously adopted:—

- That the report now read be received, adopted, and entered in the minute-book of general courts, for the information of the proprietors.
- That John Mitchell, Esq., and John Oliver Hasson, Esq., be re-elected directors of the company.
- That W. W. Tertlington, Esq., be re-elected an auditor of the company.
- That the thanks of the meeting be given to Mr. Mauds (the secretary) for the great attention which he has always paid to the affairs of the company, and for the courtesy and readiness with which, on all occasions, he meets inquiries respecting its proceedings.
- That the best thanks of the meeting are especially due, and offered, to the chairman of the meeting, and to the directors, for the lucid statements and explanations given to the proprietors present, and for the long and gratious services which they have rendered to the company.

GENERAL ANNUITY ENDOWMENT ASSOCIATION.

An adjourned special general meeting of the members of this association was held at the London Tavern, on Thursday, the 4th inst., G. P. PARKIN, Esq., in the chair.—Several alterations were proposed in various rules of the institution, which were passed by a large majority; the same were ordered to be printed, and a copy to be sent to each proprietor.—Thanks were then voted to the chairman and directors, when the meeting separated.

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMEBOURNE MINING COMPANY.

May 1.—In the 110 fathoms level, west of Wall's shaft, the hole is ten inches wide, and worth 18d. per fathom. In the 100 fathoms level west the hole is one foot wide, and worth 10d. per fathom; the hole in the wing sinking below this level is fourteen inches wide, and worth 22d. per fathom. The 100 fathoms level, east of Wall's shaft, and the cross-cut south, towards the Flap-jack hole, is still without alteration; in the cross-cut north of Hitchins's shaft, at this level, we have just cut the hole; it is one foot wide, and worth 6d. per fathom; the hole in the stopes, in the back of this level, is twenty inches wide, and worth 16d. per fathom. The eighty and ninety fathoms levels, west of Hitchins's shaft, are still progressing towards the hole. In the back of the 90 fathoms level the hole in the eastern stopes is twenty inches wide, and worth 36d. per fathom; in the middle stopes the hole is two feet wide, and worth 48d. per fathom; and in the western stopes the hole is twenty inches wide, and worth 48d. per fathom. In the eighty fathoms level, east of Wall's shaft, the hole is six inches wide, producing stones of ore; the north hole, in the cross-cut, at this level, is twenty inches wide, composed of capel, spar, and mudie; the hole in the stopes, in the back of this level, is sixteen inches wide, and worth 28d. per fathom. In the sixty-two fathoms level, east of Bray's shaft, the hole is small and poor. In the seventy fathoms level, west of Hitchins's shaft, the hole is ten inches wide, producing good stones of ore, and promising improvement. In the sixty-two fathoms level the hole is thrown out of its regular course by several small cross-courses, the ground at present being much disordered. In the deep adit, east of Lady Beaum shaft, the hole is sixteen inches wide, composed of capel, spar, and mudie, and occasionally producing stones of ore. We weighed on Friday last March ores, 200 tons 4 cwt. 2 qrs., and sampled April ore, computed 206 tons.

T. RICHARDS.

BEDFORD UNITED MINING COMPANY.

May 2.—In the forty fathom level, east of the old engine-shaft, the hole is twenty inches wide, composed of capel and mudie, with good stones of ore. The new engine-shaft, in the eastern part of the mine, is sunk 4 fms. 3 ft. below the ten fathom level—ground favourable for sinking; the hole is two and a half feet wide, composed of gossan, spar, and mudie, mixed with stones of black and grey ore. In the ten fathom level east the hole is two feet wide, composed of gossan and spar, with good stones of black and grey ore, and presenting a very favourable appearance. The tribute pitches are without alteration.

J. PHILLIPS.

TINCROFT MINING COMPANY.

May 1.—We have still a very promising hole in the engine-shaft, worth from 30d. to 35d. per fathom. There is no alteration in the sixty fathoms level, either east or west, but we hope to see the hole beyond the cross-course in a short time; the hole continues very promising, although at present yielding but a small quantity of ore; driving west on same hole, from where we cut into it, the end is worth about 18d. per fathom. The hole in the fifty and, to the west of the shaft, has improved in the past week; it is now worth about 30d. per fathom. The stopes in the back of the sixty and back of the forty continue to yield fair quality work, as do also the pitches; an material alteration in either the forty or thirty-west. The hole in the fifty-five fathoms level, west of Palmer's shaft, is still looking very promising; ground in the shaft more favourable for sinking. In the south mine, the wing, sinking under the eighty-one, is yielding good work for tin and copper ore, worth about 30d. per fathom. The cross-cut at the ninety is now passing through some branches of ore, similar to those we passed through at the eighty-one, when near the hole at that level. We sampled and weighed on Saturday 300 tons 4 cwt. of copper ore, which I expect will fetch near 3000.

WILLIAM PAUL.

CORNISHIAN MINING COMPANY.

May 1.—The hole in the seventy fathoms level is about two feet wide, composed of spar, mudie, &c. We expect to communicate Murray's shaft to the sixty fathoms level in a few days, and shall then proceed to cross-cut the ground, as the principal part of the hole appears to be lodged to the north of this level. Some of the tribute pitches are looking prosperous. J. WHALEY.

TAMAR SILVER-LEAD MINING COMPANY.

May 1.—In the 125 fathoms level, driving south, the hole is eighteen inches wide, producing some good work; in the end driving north, at the same level, the hole is one foot wide, composed of capel and jack, but poor for ore. In the 125 fathoms level the hole is at present intersected with side courses, and unproductive. In the 110 fathoms level the hole is one foot wide, six inches of which is good work. In the 100 and end hole is three feet big, composed of floor-spar, mudie, and silver-lead ore. In the ninety-five fathoms level the hole is eighteen inches wide, producing some very work. In the eighty-five fathoms level the hole is six inches wide, producing ore of a fair quality. In the seventy-five end the hole is eighteen inches wide, good work. In the sixty-five fathoms level the hole is eighteen inches wide, producing ore, but not rich. In the fifty-five fathoms level the hole is two feet wide, chiefly composed of capel and floor-spar, intersected with one. In the forty-five fathoms level the hole is one foot wide, producing ore, but rather poor. In the thirty-five fathoms level the hole is divided into two branches, which is also poor for ore. On Saturday last we held our usual setting, and we have now twenty-nine pitch-poles, employing ninety men, on a tribute varying from 4d. to 1s. in the £, on the value of the lead only. The new shaft, or inclined plane, is sunk about five fathoms below the surface; the ground is favourable for sinking. The engine house for the new stamping engine is almost in a forward state of building. At the north mine, at the thirty fathoms level, we have extended on the hole about seven fathoms in length, and have found it productive, and of a promising character; we have not driven the end south of this level since our last report, for want of air. In the south end, driving at this level, the hole is at present rather in a divided state, and poor. We have to day sampled two parcels of rich silver-lead ore, computed 101 tons—Nos. 1, seventy-four tons, and No. 2, twenty-seven tons, and have paid on Saturday, the 12th inst., for the air, sample of which, with advice of sale, has been forwarded to each purchaser.

J. SPAGNOLO.

CALLOMOTON MINING COMPANY.

May 1.—In reporting on these mines, I have only to inform you that our operations continue to go on well. The suspension, during the past week, has been fully engaged in reading down pumps, also the main road, being, however, the same at the twenty fathoms level. The engine is now working steadily, and the water is sinking as fast as can reasonably be expected, being about eight fathoms below the surface; the ground is favourable for sinking. The engine house for the new stamping engine is almost in a forward state of building. At the north mine, at the thirty fathoms level, we have extended on the hole about seven fathoms in length, and have found it productive, and of a promising character; we have not driven the end south of this level since our last report, for want of air. In the south end, driving at this level, the hole is at present rather in a divided state, and poor. We have to day sampled two parcels of rich silver-lead ore, computed 101 tons—Nos. 1, seventy-four tons, and No. 2, twenty-seven tons, and have paid on Saturday, the 12th inst., for the air, sample of which, with advice of sale, has been forwarded to each purchaser.

H. HAMPTON.

THREE MILLS WORKING COMPANY.

April 30.—The engine, east of Christon, is ten inches wide, with stones of ore. In the eighty-west we are driving, and expect soon to cut the hole. The eighty-east is four feet wide, more or less good ore on the north part of the hole. The vein under the eighty-east is fourteen inches wide, and worth one and a half pds. of good ore per fathom. The sixty-west is three and a half feet wide, worth 18d. per fathom. The fifty-west has some good stones of ore, and is more rocky. At Gladstone the fifty-east is two and a half feet wide, kindly, but little ore. The fifty-east is worth 18d. per fathom. The forty-east has very little ore, and this level east is worth 18d. per fathom. H. SYMONS.

H. SYMONS.

WEST WHEAL JEWEL MINING ASSOCIATION.

May 1.—No alteration in the ground in Buckingham's engine-shaft since last. The seventy-east, on south branchhole, is worth 7d. per fathom, and ground more favourable for driving. The seventy-west, on Wheal Jewel-hole, is worth 30d. per fathom. The seventy-east, on the new hole, is twenty inches wide, composed of spar, pram, back, and gray ore, looking very promising to be a productive hole for ore. The fifty-evens east, on Buckingham's hole, is one foot wide, worth 3d. per fathom. The fifty-seven east, on Wheal Jewel hole, is worth 18d. per fathom.

S. LEAN.

PRERIGOLIAN MINING COMPANY.

April 20.—The lower part of the hole in the wing sinking under the fifty fathoms level is nine inches wide, producing half a ton of ore per fathom; this wing is suspended at present, because we have cut water in it; a rise will go up speedily when the sixty-two fathoms level is driven under it, which is at present fifteen fathoms west; a pitch is set east and west of this wing, in the bottom of the fifty fathoms level, by four men, at 6s. in the pound. The part of the hole we are driving on at the sixty-two fathoms level, east of Baker's shaft, is about two feet wide—saving work, but not so good as last reported. On the setting-day, which was yesterday, 20th inst., six pitches were set as follows:—One by four men, at 6s. 6d.; one by four men, at 8s. 6d.; one by two men, at 8s. 6d.; one by two men, at 10s.; one by two men, at 11s.; and one by two men, at 12s. in the pound—the tributes to dress their own ore.

H. WILLIAMS.

CONSOLIDATED TRETIO MINING COMPANY.

May 1.—The fifty fathoms level, east and west of Newwood's shaft, are much as last reported; we have not made much progress in these levels in the past week, in consequence of altering the pitwork in Newwood's shaft. The hole in the forty fathoms level, east of Newwood's shaft, is one foot wide—good tribute ground. The tin hole in the back of the adit level, east of Morcom's shaft, is eight feet wide—tribute ground.

H. WILLIAMS.

J. MORCOM.

SUCCESSFUL MINING OPERATIONS IN SOUTH AUSTRALIA.

A few weeks ago, we had the pleasure of stating that the proprietors of the Wheal Gawler Lead Mines were so encouraged by the report of Mr. Robert Stagg, of the governor and company's office, Middleton Terrace, Durham, on the quality of the lead and silver ore found upon their estate, that they had determined to pursue their mining operations upon a more extensive scale than ever. That pleasure is, however, considerably heightened by the fact, that, since the above announcement was made, four distinct holes of exceedingly rich metal have been found at Glen Osmond, on the property of Osborne Gillies, Esq., our late Colonial Treasurer—a circumstance not altogether conclusive of the fact, perhaps, but one which certainly justifies us in supposing that the whole range of hills from the neighbourhood of Adelaide up to Cape Jervis, is one continuous succession of valuable mineral deposit. Unwilling, in a matter of such grave importance to the colony, to take the testimony of a second person on the subject, we made a visit in person to Glen Osmond yesterday, and, from having seen somewhat of the indications of valuable mines in the counties of Durham and Cumberland some years ago, we should say that those on Mr. Gillies's estate exceed the reasonable expectations of the least sanguine of miners. So near the surface is the ore deposited, that one

